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ANNUAL INDEX

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[1] Krantz, J. C., Jr., and Carr, C. J.: Pharmacologic Principles of Medical Practice. Williams & Wilkins Co., Baltimore, 1949, pps. 114-119.

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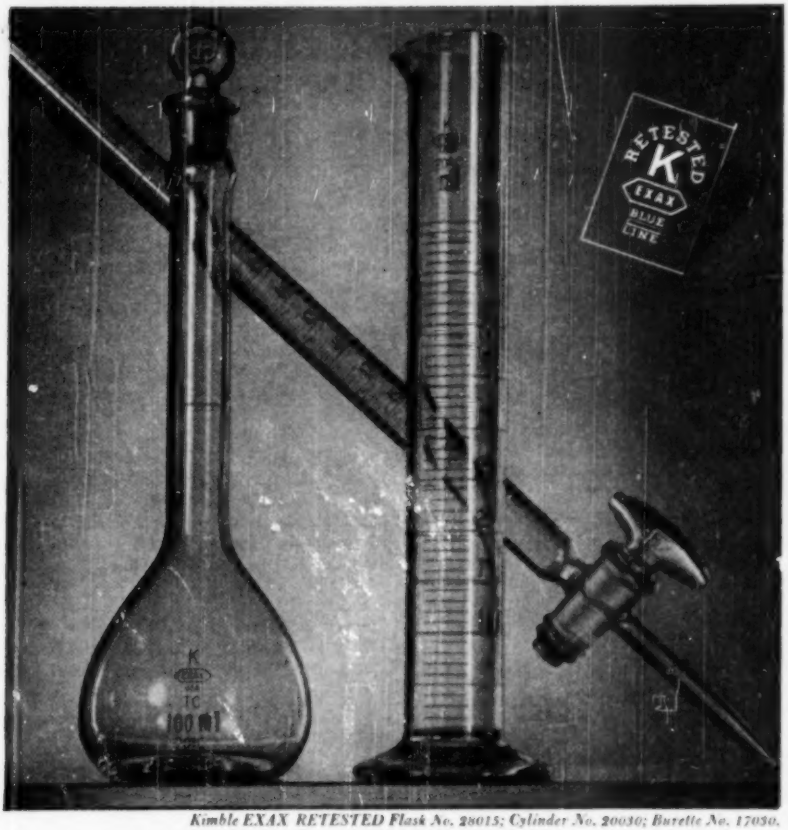

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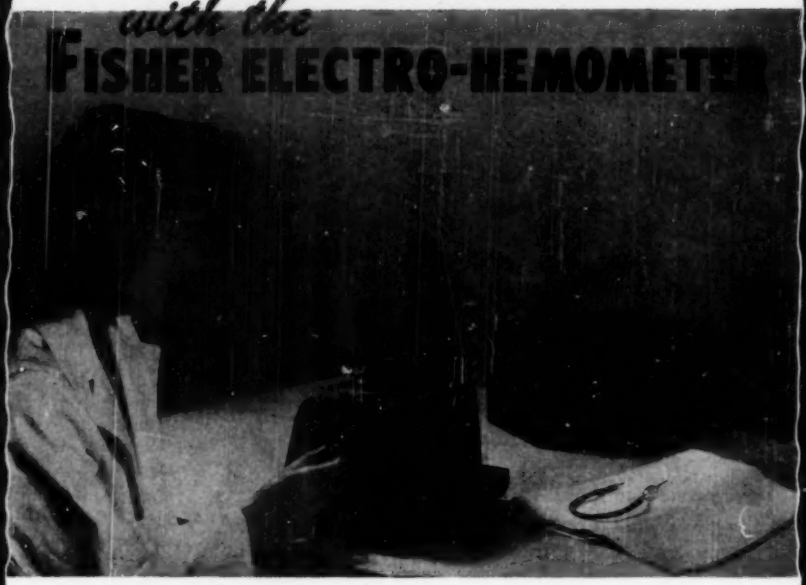

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3. Donald, J. R., Jones, C. L., and Maclean, A. R. M.: Am. J. Pub. Health, Feb., 1924.

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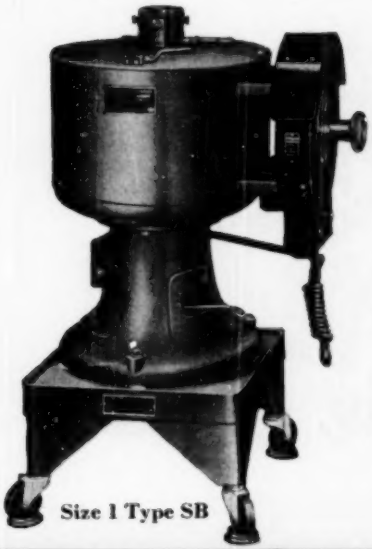

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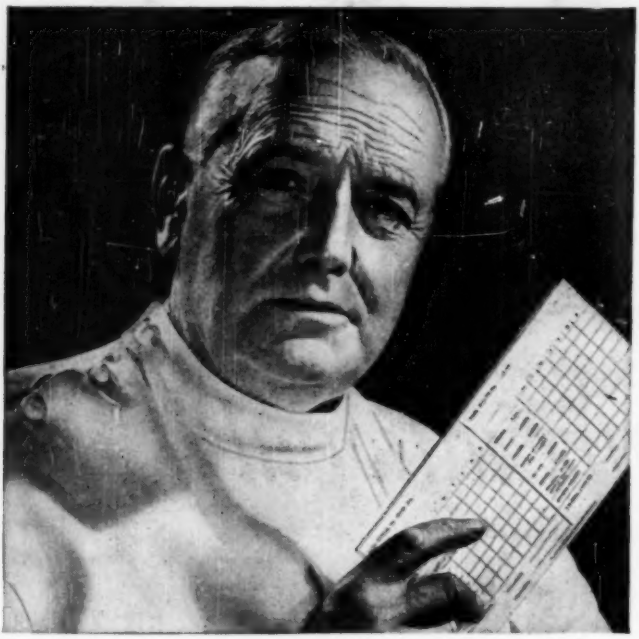

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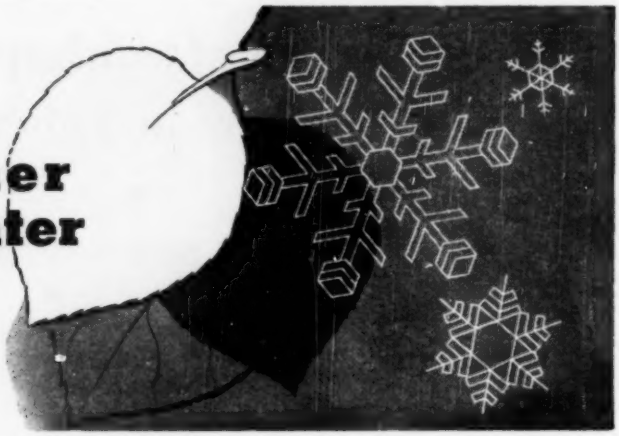

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International Aspects of Child Feeding*

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THE growth of nutrition as a science, especially within the last decade or two, is representative of the increasing value attached to it as a tool, not only in public health programs, but also in planning agricultural production and the distribution of food. Let us consider some of its international aspects as related to child feeding programs.

It may be remembered that in 1937 the Mixed Committee of the League of Nations said in its report: "The movement towards better nutrition in the past has been largely the result of the unconscious and instinctive groping of man for a better and more abundant life. What is now required is the conscious direction of the natural tendency towards better nutrition. Such direction constitutes policy. The primary concern of nutrition policy is with bringing foods essential for health and physical development within the reach of all sections of the community. . . ."

It was in this spirit that the problem was reviewed at the United Nations Conference on Food and Agriculture, held at Hot Springs in 1943. Those who are familiar with that Conference will recall that the basic principles which should guide FAO in its nutritional activities and the objectives to be aimed at were fully discussed.

At the Quebec Conference in 1945 where FAO—The Food and Agriculture Organization of the United Nations —came into being, it was recommended that improvement of the diet of pregnant and nursing women, infants, preschool and school children should be an immediate occupation of FAO, and likewise hold a prominent position in its long-term program. It is the Nutrition Division, one of the six technical divisions of FAO, that has concerned itself with this task.

Malnutrition in varying degrees is known to exist in all classes and in all countries. Aside from an inadequate food supply—either local, such as the milk-deficit areas in the Southern United States, or national, such as still obtains in many countries today—poverty and

* Presented at a Joint Session of the American School Health Association and the Food and Nutrition Section of the American Public Health Association at the Seventy-seventh Annual Meeting in New York, N. Y., October 27, 1949.

ignorance are recognized as the chief causes of malnutrition.

School feeding programs can play an important role in combating malnutrition. The extent to which they may supplement the home diet will, of course, vary, depending upon the economic status and the food habits of the group concerned. But an important aspect is the very excellent opportunity they afford for education in nutrition. The school child is at a vulnerable age when good or bad food habits, which may have a bearing on his whole life, are formed. Furthermore, the knowledge and appreciation of nutrition gained by a child at school are frequently transferred to the parents and may influence their choice of foods.

School meals are perhaps the most common form of supplementary feeding, and programs differing considerably in their organization and scope operate in various countries. It is interesting to note that the provision of meals for school children was originally undertaken by charitable or voluntary organizations as a means of assisting needy children.

Frequently, the so-called "meal" took the form of a bowl of broth or a slice or two of bread, and contributed very little to the child's nutritional needs. Gradually, however, education authorities took an interest in school feeding as they began to realize the important influence of an adequate diet on the well-being—and behavior—of children. Today in some countries such as the United Kingdom and the United States, there are national school feeding programs supported by government legislation. In some countries voluntary organizations have initiated local programs, while in others no action has as yet been taken. The recent war and the acute food situation which followed, served to highlight the value of supplementary feeding programs in maintaining or improving the health of vulnerable groups. Much of the work of relief organizations has been directed toward the feeding of children, and in some instances their activities are leading to the establishment of government sponsored programs.

There is considerable variation in the type of food provided. In the United Kingdom a complete hot meal is served, and about 52 per cent of the school children now participate in the program, as compared with 4 per cent in the prewar period. This is in addition to a milk-in-school scheme which was introduced before the war and in which a large percentage of the children continue to participate. In some countries preference is given to the distribution of milk only. This method of supplementing the diet has application in those countries such as Belgium and the Netherlands, in which traditional customs require the child to be part of the family group for all meals. Of interest is the School Breakfast recently instituted in Greece by the Ministry of Education and which is reported to be gaining in popularity. The meal consists of a cup of hot milk cocoa and a slice of milk raisin bread. The development of a palatable block or pellet of milk powder, sometimes with added flavoring, has proved useful and popular in districts where fresh milk supplies, or facilities for preparing food of any kind, are not available.

FAO's Nutrition Division has been collecting information on the programs which are in operation, and is planning a series of publications designed to encourage and assist governments in developing programs of a practical and feasible nature. Another aspect of our work relates to regional activities. Meetings of nutrition workers are convened to survey the nature and extent of nutrition problems in a particular area and to draw up recommendations which will serve as a basis for initiating or developing programs designed to improve nutrition in that area. For example, in

February, 1948, a Committee of Nutrition Workers from countries in East Asia was held at Baguio, the Philippines.[1] The diet in this region is characteristically low in calories, as well as in protein and other nutrients. The Committee recognized that it is impossible to provide adequate quantities of milk for the millions of children in the vast areas of Asia and that attention must be given to available foodstuffs of high nutritive value.

Incidentally, various projects have been undertaken in India to develop a satisfactory soybean milk and curd and to study their nutritive value as compared with that of cow's milk. In Bangalore an extensive experiment has been carried out on a group of school children. Preliminary results indicate that the soy products are somewhat inferior to cow's milk in supplementing the rice diet. However, there are considerable economic advantages and this work will doubtless have application throughout the rice-eating area.

The Baguio Committee recommended a type of free meal for school children based on cereals such as lightly milled rice, high extraction wheat, and millets, a pulse, small fish of which the whole body can be eaten and therefore provide calcium, a vegetable with preference given to green leafy ones, and oil, preferably an oil containing carotene. In the amounts suggested, these foods will form a meal of about 400 calories, which will contain the most essential nutrients. It can, of course, be modified in various ways in accordance with local conditions and the availability of various foods. Since that time, school feeding programs in general line with the recommendations of the Baguio Nutrition Committee have been developed in Singapore, Malaya, and Java.

Likewise, a Nutrition Conference held in Montevideo[2] in July, 1948, emphasized the urgent need for improving the nutrition of school children in Latin America. In most of the countries in Central and South America, malnutrition is prevalent among this age group and the Conference recognized that one of the best methods of controlling it is through the provision of school meals. It recommended that countries not at present in a position to organize a full service of school meals, should supply, temporarily at least, a simple "snack" which might consist of a glass of milk and "enriched" crackers. It also drew attention to the value of developing school gardens and orchards cultivated by the children.

Progress in implementing the recommendations of these conferences is being followed by FAO, and where necessary technical advice is being furnished.

Aside from this rather long-term program, FAO has been coöperating with other United Nations Organizations to further supplementary feeding projects in various countries where suffering and need are particularly acute.

In establishing the United Nations' International Children's Emergency Fund (UNICEF) in December, 1946, the General Assembly decreed that the staff and facilities of the specialized agencies should be utilized to the maximum extent feasible in order to reduce the personnel requirements of the Fund. It was in line with this decree that FAO and the Interim Commission of the World Health Organization convened a Joint Committee on Child Nutrition to advise UNICEF.[3] This Committee, composed of pediatricians and nutrition experts from various countries, met in Washington in July, 1947. In considering the foods which should be supplied by UNICEF to provide the greatest amounts of protein and other nutrients known to be generally lacking in the diets of pregnant and nursing women and children of all ages, special emphasis was given to dried skim milk. The recommendations of the Committee have been followed closely by the Fund

in developing its programs in various countries.

Since that time the Nutrition Division of FAO has given technical assistance to UNICEF in matters relating to nutrition and practical feeding programs. The work has been done both at headquarters and in the field. It has included advice to the Fund from the point of view of "nutritional economy," about the purchase as well as the use of foods for large-scale feeding programs for children and mothers. In Europe, the FAO Regional Nutritional Representative has acted as Chief Nutrition Consultant to the Fund in Europe. In visiting the various countries where the Fund is operating, he has assisted in the development of feeding programs. Another FAO staff member, attached to the Ministry of Coordination in Greece to establish nutrition services in that country, has helped to organize UNICEF's program there.

In Europe, attention has also been given to a program for making available a greater supply of indigenous milk of good quality for children. This milk is needed to replace the supply now being provided by UNICEF. A joint FAO/UNICEF field survey made in 1948 indicated a need for expanding pasteurizing plants and establishing milk drying plants, both of which would serve to increase the supplies of "safe" milk. UNICEF has been providing financial assistance and FAO technical aid to countries anxious to further such developments. Recent reports indicate that this scheme is progressing very favorably.

UNICEF activities have been extended to the Far East. Through the Nutrition Division, FAO has assisted the secretariat of UNICEF in establishing the basis of a satisfactory supplementary feeding program for countries in this region. During the past winter a staff member of the Division spent several weeks in the Philippines assisting with the organization of a demonstration child feeding program there. It is anticipated that similar UNICEF programs may be initiated in other countries in the Far East. Although only a very limited number of children may be included in them, it is felt that they will serve a useful purpose in demonstrating the value of school feeding and encouraging the development of this method of safeguarding the health of children.

Plans are now being worked out for UNICEF programs in Latin America where the need for practical programs to help combat the widely prevalent undernutrition and malnutrition is very great. It is hoped that some of the funds which UNICEF has allocated for work in Latin America will be devoted to demonstration child feeding and local milk improvement programs. Through its Nutrition and Agriculture Divisions, FAO will coöperate closely with UNICEF in carrying out these programs.

Despite the improvements which have taken place since the end of the war with respect to food and nutrition conditions, the world is still faced with serious problems. It is estimated that the world supply of foodstuffs in 1948–1949 is about 5 per cent above the pre-war average and at least 10 per cent above that of 1947–1948. But with the increase in population which has occurred in the last 10 years (an average of 20 million people each year), there is still less food available per head of the population than in the pre-war period.

Apart from long-range programs for expanding agriculture and trade in foodstuffs, one of the most effective methods which can be used to improve the state of nutrition of a population is the encouragement of supplementary feeding programs for the vulnerable groups—children from infancy through ado-

lescence, as well as pregnant and nursing women. The need for such programs exists, not only in poor and undernourished countries, but also in countries in which the available food supplies appear to be adequate. Even in the latter case, inequalities in food distribution, due to economic factors and poor food habits, may prevent large sections of the population from obtaining a satisfactory diet. The establishment of rational feeding programs in any country should be based on a thorough knowledge of the food supply and food habits of the people, as well as the nutrition situation such as can be gained by diet surveys and assessments of nutritional status. The close collaboration of administrators in the fields of agriculture, nutrition, and medicine is needed if children throughout the world are to have their rightful share of health—and happiness.

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"Peace Hath Its Victories"

"The Tennessee Valley Authority has been able to announce at the end of its fifteenth annual survey of the reservoir areas that no positive tests for malaria were found. Blood tests were made from 4,300 individuals in areas where positive tests and even high incidence had previously been shown. Every one was negative.

"This does not mean, as was carefully explained, that the scourge of malaria has completely disappeared from the area under TVA control. It does mean that in one generation it has ceased to be a determining factor in the life of the community. The same type of testing, fifteen years ago, showed almost a third positive. In some regions it was two-thirds. That could mean only that malaria, with all its debilitating effects, was endemic in the area. Each year the tests showed substantial gains. For the last four the discovered incidence has been less than one per cent. This year the test is dramatically and completely negative.

"Several factors have been at work to change the complexion of eastern Tennessee. The establishment of the State University at Knoxville brought in outside influences and changed modes of thinking. The whole program of TVA brought in different relationships of employment and gain and different possibilities in agriculture. The installation at Oak Ridge again brought in powerful influences to bear on these communities. It is easy, now, to see in this region the effects of increased purchasing power, of improved farming methods, of raised living standards.

"No other one thing, however, can better illustrate what has happened than this conquest of malaria. A community in which one-third suffers from the disease and its effects is a vastly different place from one in which the complaint is unknown. There is a different tempo in living, a different outlook on life. Malaria is an aspect of human misery and its conquest is a victory over unhappiness.

"What has been done by TVA in this field is an illustration of what is possible when scientific knowledge and determination are put to the great uses of peace. Life is enriched and progress is furthered. It is small wonder that the TVA program of malaria control has been made a model for similar efforts in other countries. It can serve also as an encouragement to us in other activities."

—*Editorial, New York Times,*
Nov. 8, 1949

The Health Officer and His Staff Receive the Foreign Visitor*

HENRY R. O'BRIEN, M.D., F.A.P.H.A.

Chief, Educational Programs Branch, Office of International Health Relations, U. S. Public Health Service, Washington, D. C.

A CITY set upon a hill cannot hide," someone observed long ago. Today, from nearly every country in the world, people are coming to the United States to study and to observe, to learn our ways of doing things. Last year our colleges and universities registered more than 26,000 foreign students. Industrial leaders from Europe—management and labor alike—come here to study our industrial methods.

Our field of public health is no exception. The nine approved schools of public health last year had 170 full-time students from other countries. This does not include students in public health nursing or in sanitary engineering, aside from those in schools of public health. The International Health Division of the Rockefeller Foundation gave 50 fellowships in 19 countries; the Institute of Inter-American Affairs, 35. Our own office in the Public Health Service had 70 fellows from Latin America, the Philippines, Greece, Germany, and Austria. The World Health Organization sent 183 of its fellows to the United States. Literally a score of other organizations in this country are offering fellowships to health workers abroad. Many governments are themselves sending people here for training in public health: India, Siam, Syria, Egypt, Liberia are examples. Each year the numbers grow. The totals are not large in themselves but the individuals are important to the future development of public health in their native lands.

Whether these people are entered in universities or spend a shorter time in travel, sooner or later the great majority come to a health department to see how it does its work. State and local departments should plan to take care of them. It is because such visits are of great interest to the foreign and the local health worker alike and because their numbers are growing that this article is written. We need to study the problem in order to make these visits truly valuable experiences for both sides.

Lest it be thought that I speak with the lofty detachment sometimes ascribed to Washington, let me explain that I served a decade in Lorain County, Ohio, and Cattaraugus County, New York, to both of which foreign visitors came, and I have worked in state departments in Albany and Hartford. In Washington, our office now sees 300 foreign health workers a year, referred by foundations, embassies, and the World Health Organization.

As of June 30 there were reported to be 1,291 full-time local departments of health in this country. Add the 48 states, any number of districts and some territories, and a substantial number of health officers with their staffs may soon be entertaining foreign visitors.

It is seldom, we hope, that the visitor descends upon the health officer un-

* Presented before the Health Officers Section of the American Public Health Association at the Seventy-seventh Annual Meeting in New York, N. Y., October 25, 1949.

awares. It sometimes happens, however, as in the case of a medical officer of health of Singapore who received an American physician who walked unannounced through the office door, took him to see some most ingenious antilarval drainage, and invited the physician and his wife home for tea. Most of us, however, learn of projected visits beforehand. With rare exceptions the foreign visitor is sponsored by some agency, which has given him a fellowship or which is arranging his program.

Our own office in the Public Health Service now makes the field arrangements for its own fellows, those of the United Nations (in the field of health), of the World Health Organization, and of various foreign governments. The Institute of Inter-American Affairs handles its own fellows and visitors from certain of the other American republics. The Rockefeller and Kellogg Foundations take care of their own grantees. The great majority of foreign visitors come through these four agencies.

All state departments of health should consider designating one of the staff to receive foreign visitors and arrange programs within the state. Otherwise a letter may go to the state health officer himself. Approach to certain large cities may be direct.

Whatever the channel, the health officer receives the inquiry—can he receive Mr. Foreign Visitor? This inquiry should come well before the proposed visit. Only a few large offices can receive visitors with a day's notice. For most departments the question should be raised one, two, or three weeks in advance. If the visitor is to have inservice training, arrangements should be made from one to three months ahead.

When Mr. Health Officer opens the letter asking him to accept someone from abroad he should find there certain definite information. His name, his country, his position there, his fields of interest, when it is planned to have him come, how long he can stay—how good is his English—these are a minimum. It is interesting to know, too, where he graduated in medicine, nursing, or some other field, and his experiences between graduation and his present work. These save questions later and may suggest interesting contacts.

To a letter of inquiry Mr. Health Officer usually replies that he will be glad to receive Mr. Visitor. But if the health officer and his staff are pressed with work, or have had many visitors recently, or illness or vacations interfere, or other situations obtain, it is certainly appropriate to decline.

Once the visitor is accepted, what plans should be made for his coming? Aside from a general discussion, should a detailed program be made beforehand? There are marked differences of opinion on this point among those who receive visitors. Some prepare itemized schedules days before. The visitor, it is understood, will arrive at 8:30 of a certain Monday morning. At 9:00, it is then planned, he will pay an introductory call on the health officer, at 11:00 he will be taken to another office, etc. All concerned write this on their calendars and arrange their other appointments accordingly. Nurses particularly are inclined to this procedure; and perhaps because they are accustomed to rather exact schedules, it works fairly well with them.

Others have had chastening experiences, especially with physicians. Our own slavish regard for the clock and the calendar does not obtain in every land from which our visitors may come. At the last place visited there may have been something of special interest which called for a longer stay. Perhaps the visitor went sightseeing over the weekend, or fell ill, or his train was delayed. At any rate, Monday noon comes before he arrives, or late Monday afternoon, or Tuesday. One visitor who was scheduled to spend two weeks with a certain de-

partment arrived on Friday afternoon of the second week. This is unusual, but many scheduled visitors are not found on the steps when the office is unlocked Monday morning.

The first conversation often reveals that the visitor has some additional interests that were not mentioned in the letter about him, or that he places special emphasis on certain points. Some health officers therefore prefer to wait until the visitor's arrival before making other than general plans. Then, on the basis of the letter from the sponsor, the interests and the emphases the visitor himself reveals, and the health officer's own knowledge of public health and of the strong points of his department, a detailed program emerges. Time is sometimes lost before the visitor can then start on his schedule, it is true, but this is soon made up.

There are times, of course, when the visitor is a well known foreign health worker and is coming for only a day or two, for definite purposes. For him a schedule must be prepared beforehand, and it may be expected to work.

Someone is liable to ask how many appointments are best made for the visitor's day. It is our experience that four is usually the maximum number, two in the morning, two in the afternoon. If more than this number are scheduled, there is a possibility that one especially interesting appointment may run over; then, since there is no leeway, the visitor is late for the next appointment, and there is general inconvenience. If the ordinary visitor sees too many people in one day, his mind may become a bit saturated and confused. It is better to allow some time between appointments for him to think over and digest the conference just finished, make notes, study literature just received or think ahead for the interview to come.

What, someone else asks, about the visitor with inadequate English: A man who is obviously competent at home may be struggling with poor English; he and his host are embarrassed, and frustration and annoyance may result. Fortunately, such a situation is encountered less and less often. More and more people around the world are studying English. The agencies which give fellowships are stressing the importance to the individual of a ready and understanding use of English. Better tests are being devised, and their use extended, for measuring the candidates' English. At that, not all visitors will be equally proficient. Some understand only slow speech, careful enunciation, simple wording and are aided by frequent reference to printed material.

Visits vary so in purpose, timing, and duration that generalizations are sometimes difficult. We ourselves plan a visit of general observation before the visitor enters a school of public health. For this a small or medium sized local health department is selected. It is intended that the visitor see the scope and working of American public health. He should watch what the health officer does, the public health nurse, the sanitarian, the laboratory worker, visit the various clinics, etc., all without reference to his specialty. He is getting a general picture which will be of great help to him in school.

The summer following his school session he will be paying attention to his own field. Instead of a succession of visits of from three to five days each, covering as many departments as possible, emphasis is now placed on a longer stay in one department, followed by shorter visits to a number of others, for comparison with the first. In the longer period, possibly of a month or more, it is usually advisable for the visitor to be put to work as an intern in the department.

The older visitor, here for from three to six months of travel, may well have a longer stay in one place, studying all the aspects of our procedures in his field; while shorter visits in several other de-

partments will enable him to make comparisons and enrich his experience. He cannot, however, visit too many places. Some years ago Dr. Robert Lambert, then of the Rockefeller Foundation, observed that after three months their fellows seldom saw anything new. The law of diminishing returns begins to operate.

Some visitors, not appreciating this, like to see a large number of places, gathering hotel labels, as it were. It is natural for one to ask of the health officer host, "Where else do *you* think I should go?" and suggestions accumulate. The wise health officer makes his suggestions to the sponsor, who will appreciate them. They may only confuse the visitor, to whom fields in the distance may seem still greener than the one about him.

A question that frequently comes up in the mind of the health officer is: "What entertaining should e do?" That is a natural and a proper question. People like to entertain. Those of us who have been abroad have happy memories of the receptions we met here and there. Yet only the occasional health officer is fortunate enough to have an entertainment account at his disposal. For most health workers it is a matter of drawing on personal funds already well obligated. Several suggestions seem in order. For one, it is not necessary to reach for the luncheon ticket; most visitors have comfortable travel accounts. Let any entertaining have a personal touch. The health officer may take the visitor to his Rotary or Kiwanis Club, which is pleasant for everyone. Most foreigners appreciate greatly an invitation to a home. One of my painful memories is the statement of a student about to leave that in a year in this country she had never been invited to an American home. She was not complaining; I had asked her a direct question. Fortunately, her experience is not typical. Though the departure of the household servant makes dinner parties sometimes difficult, an afternoon tea or an evening call is possible and pleasant. One visitor told with appreciation of evening bridge games in the home of his laboratory host. Our picnics seem to delight our foreign students. Both the informality of the occasion and the skill of the local staff in frying a hamburger are matters they long remember. Most field visits are made in summer, so that these are practical suggestions. A concert or a baseball game may appeal to your guest. Whatever entertaining is done, the amount expended is not significant but rather the friendliness shown.

The visitor may enjoy the special features of the region, such as beautiful scenery, apple orchards, cotton or wheat fields, but a businesslike visitor will not cut into working hours for side trips.

Many of our visitors have definite religious convictions and are accustomed to attend Catholic or Protestant services on Sunday. It was humbling to me to have an Indian Methodist say she would prefer no appointments on Good Friday. In entertaining it is sometimes well to remember Moslem or Hindu customs on pork or beef; a friendly inquiry does no harm and may prevent embarrassment.

The Committee on Friendly Relations with Foreign Students suggests that if the visitor is more than a short time in a place he be brought into contact not only with health workers in his own fields of interest, but also with other community activities. The home and farm bureaus in rural counties are examples. Does the community have a forum, or a discussion group? Some visitors are asked to speak before luncheon clubs or Sunday schools or high schools. These general glimpses of American life are valuable. A while ago a Chinese doctor was sent to study hospital administration in North Carolina. From letters we received later, both from him and from the local sponsor, it was evident that

both sides thoroughly enjoyed his visit.

It is more and more possible to send to a local department a group of two or three people with similar interests. This is practical and time-saving. In a larger group, however, unless it is carefully chosen, differences of interest may appear and be confusing. The seven member commission of the WHO studying VD practice in this country was carefully selected and has just completed a successful program, traveling together.

People sometimes ask: Why should we take the time to receive visitors? The answers are many. As scientists we want to share information with others. It is worth while, too, in our own interest. In the past we have relied on quarantine and distance to keep us free from major epidemics. Today, when students leave Manila on a Friday night and are in Washington for Sunday tea, distance and quarantine are not enough for our protection. To paraphrase Abraham Lincoln, this world cannot long remain half well, half sick. We must improve health conditions in sore spots anywhere. Each health department receiving a foreign visitor has an opportunity to help in the improvement of health in another country. If the sword of the warrior against disease is forged in the school of public health, it is sharpened in his field visits.

The door is now opening for some of our health workers to go abroad themselves, under Fulbright or WHO funds. They will then meet, as many of us have already met, the help and the hospitality of their foreign colleagues. Let us extend the same help here.

These health workers who have visited us are people of growing importance in their own countries. Today, there are increasing numbers of people in every country who have been here, who know our ways and like us. They often have great influence at home and appear at international meetings as delegates. There they understand our positions and coöperate with us. They are people whom you, or the health officer before you, helped to train and won as friends.

Thoughtful opinion in this country is increasingly convinced that in the world today we need friends and want them. The past decade has taught that lesson. Nowhere is coöperation and friendship easier than in the field of health. Whether we ourselves ever travel abroad or not, we have an opportunity to share in this. We can aid in the development of health work in foreign countries or in places so distant that we have heard little of them since school days. We can win friends from far away for our country. We can broaden our own horizons and help safeguard the future for our children. This is the opportunity that opens when health officers and their staff prepare to receive the foreign visitor.

Accident-Proneness: A Critique

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THE concept of "accident-proneness" has been intensively discussed in the modern psychoanalytic literature. Its appearance in a recent editorial in the *American Journal of Public Health*[1] and in a symposium in *Public Health Reports*[2] calls for critical analysis of the public health implications of this thesis.

As developed by Dunbar, Alexander, Rawson, and others, the concept of "accident - proneness" states that the majority of accidents occur as the result of *subconsciously intended* actions on the part of certain personality types. It is suggested that accidents are caused by deep-seated psychological conflicts in the individual, rather than by physiological or environmental conditions.

Accidents do not just happen

There is little doubt that accidents are only infrequently the result of pure chance. The emphasis given by the psychoanalysts to this point is a contribution of major importance. Accidents represent the interaction between man and his environment, when the condition of one or both of the interacting elements is such as to increase the probability of an untoward result. Assuredly, "accident-prone" individuals exist—but so do environmental safety hazards. It is as foolish to deny the contributory role of the environment as it is to deprecate that of the individual.

All accident-proneness is not psychological

All accident-prone individuals, however, are not necessarily characterized by personality disorders, as implied by the proponents of this thesis. Individuals who have unusual predilection for injury may reveal a vast number of pertinent *biological conditions*—such as fatigue, transient emotional stress with resultant inattention, impaired vision or hearing, underlying disease, etc. Moreover, the individual cases of carelessness and incompetence that may be psychologically determined, reflect immediate economic, social, or domestic pressures as well as complex psychopathology originating in early life. The first point is, then, that the accident-prone individual is not *always* a repressed or frustrated person who "subconsciously intends" the injury.

Environment plays a basic role

On the other hand, the insistence that most accidents are "caused" by neurotically motivated individuals relegates to a position of minor importance the role of environmental hazards. Accidents do reflect—and in wholesale manner—defects and inadequacies of industrial equipment, of housing, of traffic systems, of play areas, and of many other remediable conditions of daily life. This aspect of the accident problem is investigated in more detail below.

It is, then, the *overemphasis* upon hidden psychological motivation and the resultant minimizing (even when unintentional) of physiological and environmental factors which causes concern with the Dunbar-Alexander theory of accident-proneness. The overemphasis is not merely an inference. Alexander, in fact, states that "*most* accidents are unconsciously intended."[3] The A.P.H.A.

editorial summarizes this concept by stating that "the *vast majority* of accidents . . . are in a subtler sense determined by underlying trends of human personality."[1] (Italics added. E. R. W.) The entire event is transferred from the real world of persons and things to the disembodied arena of an individual mind.

Implications of the psychoanalytic concept

The dangerous consequence of this thesis is to restrict accident prevention efforts to the appraisal of personality types and the removal of "susceptible" individuals from the potential accident situation. Indeed, Alexander specifically states[3] that "the primary measures must be directed toward the person." He further states that since intensive psychoanalysis and psychotherapy would be the only effective means of handling such persons, and since these are impractical as mass measures, "recognition" and "removal" of designated individuals are the only feasible methods of accident prevention.

It *is* important to reassign workers who have a susceptibility to accidents to less hazardous jobs. This can be done only on the basis of careful records, and these should follow study of accident rates among the replacements. Safeguards must also be set up so that workers are not downgraded or fired under various pretexts related to this concept.

This procedure, however, is applicable only to a limited number of workers. It is by no means clear just how the supposedly accident-prone individuals in our society are to be removed from their involuntary contact with slum housing, icy pavements, drunken drivers, etc.—or even from their contact with difficult occupations in a period of job scarcity. The corollary of a concept that attributes most accidents to subconscious intention on the part of certain individuals is the relaxation of efforts to affect action of industrial managers, automobile manufacturers and used car dealers, city planners, housing authorities, and the like.

This shift of emphasis from environmental hazards to personality factors is fraught with social danger. A grim chapter in the history of the Industrial Revolution is that which deals with the crippling and killing of thousands of workers who were exposed to the unguarded machines, the condemned mine shafts, the ill-lighted sweatshops of the emerging factory system. One of the great social achievements of our time (still far from complete) is that of Workmen's Compensation legislation, which—after intense struggle—has taken the responsibility for occupational injuries off the back of the disabled worker and has placed it on the owner of the plant. Amazing progress in industrial hygiene and safety was stimulated directly by these laws. A reading of Dr. Dunbar's works on "accidentitis" makes one apprehensive lest some employers attempt to alter the current legal protections for the worker by introducing this personality concept as a new reason for the old practice of denying compensation. It would be a giant step backward if an injured worker's compensation were to be denied on the grounds that the accident was due to his "impetuous" and "resentful" personality, rather than to the complex of contributory causes.

Lack of proper evidence for the psychological entity

There is much more that is troublesome in this concept that "most" accidents are the result of unconscious behavior on the part of certain personality types. Proper scientific evidence for the existence of a specific psychological pattern seems to be lacking. As stated by King[4]:

> The finding that a relatively small percentage of the accident group is responsible for a high percentage of the total accidents does not constitute proof of the existence of accident

proneness as a clinical entity. It does not identify biological characteristics invariably associated with this special susceptibility, nor does it preclude the possibility of a greater exposure of the "accident prone" group to hazardous situations. The test of the hypothesis lies in the success or failure to identify causal physiological or psychological characteristics, or their combination, present in individuals showing a high frequency of accidents, and absent or present to a lesser degree in "accident free" individuals with a comparable background of experience.

Accidents as the result of multiple factors

A wealth of data is available to show the interdependence of many coexistent factors in the causation of accidents. The epidemiological approach of Gordon [5] stresses the complexity of factors—seasonal, demographic, genetic, biologic, geographic, etc., as well as psychologic. His conclusions are pertinent to this critique:

> That accidents and disease, as they affect groups of people, so frequently show similar distributions is no reason to assume identical causes; indeed, the expectation is that they are different. The illustrations presented here were purposely drawn from a wide variety of accidents and diseases, to the end of demonstrating that both great classes of morbid conditions of man are governed by broad biologic laws; that in their action on groups of people they are the resultant of the total forces within a universe, of an ecologic entity. . . . A wide range of conditions commonly contributes to the prevalence of an injury.

The time trends and statistical distributions of available accident data seem to support the conclusion that no single type of personality configuration can explain the majority of accidents. The National Safety Council [6] has reported that non-motor vehicle accidents have declined consistently since the turn of the century, while accidents due to motor vehicles have steadily increased in proportion with the greater number of vehicles in use and with the increasing congestion of traffic ways. Studies of occupational injury [7] constantly reveal that certain industries (e.g., mining, lumber, construction) have significantly high accident rates. The overall accident rate in industry dropped steadily from 1936 to 1941, but then rose abruptly as conditions of wartime production developed.[8] This change was attributed to such factors as fewer replacements of parts, crowding of equipment, unsafe wearing apparel, fatigue, new unskilled workers, and the like. Another report [6] showed that the rate of occupational injuries increased disproportionately as the length of the working day exceeded the standard of eight hours. A survey by the Travelers' Insurance Company indicated that three-fourths of all cars involved in accidents had serious defects involving headlights, tires, brakes, etc. Britten [9] has analyzed National Health Survey data to show the inverse relationship between rental value of housing and home accident rates. (This invites attention to the "proneness" of the substandard housing environment as far as accidents are concerned.) It is difficult to reconcile the thesis of psychologically determined accident-proneness with such diversified environmental relationships as these studies demonstrate.

This tendency of psychoanalysts to attribute universality to observations made in circumscribed situations is well scored in a recent psychiatric review [10]:

> A dominant defect of the Freudian psychoanalytic discipline is to take or mistake a part for the whole, unwarrantedly to assert that a complex or a number of complexes, which may or may not be present, are causative in human behavior.

"Accidentitis" would seem, then, to be a poor resolution for the diverse problems of mine cave-ins, inadequate fireproofing, impaired and uncorrected vision, etc. Neither submerged guilt complexes nor overly compulsive behavior reactions are sufficient explanation for the high incidence of accidents among workers exhausted by production speed-up or among children forced to the streets for play space. The psychoana-

lytic explanation is inferior to the biologic when the excessive accident rate in the very young and very old is analyzed. One wonders if the studies of truck drivers (which show that a relatively few drivers were responsible for a large proportion of the accidents) carefully examined the distribution of these individuals according to types of routes covered, amount of night driving, unrelieved hours on the road, etc.—*before* concluding that personality type (sic) was the decisive factor. Individual case histories —however dramatically presented—are inadequate substitutes for painstaking analysis of accident data, which show accidents to be regularly concentrated in the hazardous occupations, congested roadways, and substandard dwelling places. Is it to be assumed that the so-called accident-prone personality type has an affinity for these particular surroundings?

CONCLUSIONS

An accident is the result of undesired and unanticipated—but preconditioned —interaction between the individual and his environment. Psychological motivations undeniably contribute to accidental occurrences. It is, however, essential that we continue to emphasize social control of the hazardous environment, correction of physical and mental impairments, and education for safety. To depend primarily upon detection and removal (or psychoanalysis) of particular personality configurations is neither warranted nor wise in light of the incomplete state of our present knowledge of accident-prone behavior patterns. There is serious need for statistically sound and scientifically convincing data to test the psychoanalytic theory. Until proof of accident-proneness is produced from study of mass accident distributions—and not only from intensive analysis of individual cases—the factors in accident prevention which *do* have a scientific basis must not be displaced. As in any experimental work, the theory must be subjected to the most rigorous tests before it can be generally accepted. As it is now presented, the "accident-prone" concept leads to defeatism and ultimately to reactionism in such fields as social insurance, industrial hygiene, housing, and city planning.

Successful accident prevention must recognize the *total* ecologic complex. "Proneness" to accident is at once an attribute of the disturbed personality, the impaired physiology, and the unsafe conditions of environment.

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Engineering Aspects of Home Accident Prevention*

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THE problem of home accidents is a blind spot in the eyes of health agencies. Long ago the public health agencies could have taken the initiative in the prevention of home accidents because of their close relationship with the individual and his home environment. Accident prevention is within the scope of the public health objectives of preventing disease, prolonging life, and promoting physical and mental efficiency and well-being. Since public health personnel are trained in the fundamentals of controlling or eliminating health hazards, they can readily adapt these principles to home accident prevention.

The present incidence and prevalence of home accidents challenge every effort for their control. Accident facts for 1948 [1] released by the National Safety Council indicate that approximately 98,000 persons were killed in all types of accidents and 10,300,000 received disabling injuries, of which 370,000 resulted in some permanent impairments. The cost in salaries lost, increase in insurance overhead, medical care, etc., was estimated at $7,400,000,000 for the year.

As a cause of death, accidents rank fourth in the United States, exceeded only by heart disease, cancer, and cerebrovascular diseases. Viewed strictly from the effect on the national economy, however, accidents form the leading cause of death. This was illustrated by Dr. Frank G. Dickinson,[2] Director of the Bureau of Medical Economic Research, American Medical Association. Using as measures the years of life expectancy lost and productive years lost, he showed that accidents have become economically more significant than heart disease, cancer, and the cerebrovascular diseases, which are primarily degenerative diseases.

Although the death rate for accidents in 1948 of 67.1 per 100,000 population was the lowest recorded in the years for which records are available, home accidents alone, of all categories of accidents, showed an increase. Up to 1947, motor vehicle accidents were the leading cause of accidental deaths. In 1947, and again in 1948, home accidents had become the number one killer in the accident field. In 1947 approximately 1,800 more persons were killed in the home than were killed on the streets and highways of this nation. In 1948 this differential increased to 3,000.

Home accidents alone rank as the ninth leading cause of death with 35,000 deaths. Add to this figure the approximate 5,250,000 persons injured—or over one-half of all accidental injuries and include the 140,000 who suffered permanent impairments. Then we realize we are faced with a most serious problem, one which cannot be met by any one professional group in the health field. It is a challenge to every health depart-

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ment and will require the services of the entire staff. Only by coördinating all our efforts can we show progress in the reduction of morbidity and mortality due to home accidents. Public health engineers, especially, have an opportunity to play again a leading role in the control of a serious health hazard comparable to the one played in the control of malaria and typhoid fever.

Basic causes of accidents can be classified under two major headings: those related to environmental factors and those involving human factors. They frequently result from the combination of environmental hazards and human errors. This intermingling of environmental with human factors makes it difficult to separate them and assign a primary significance to one and a contributing role to the other. A factor which adds to this difficulty of separation, and one which every investigator should recognize, is that human errors are often made glaringly evident by the accidents while coexistent environmental hazards are overlooked or considered too unimportant to be reported. Accidents may be prevented by the control of either human or environmental factors. We can help to attain ideal safety by the maximum practicable reduction or elimination of every environmental hazard. We may consider the engineering problem as one of creating a "fool-proof" environment which will make it easier for an individual to learn and practise only safe habits.

The Kansas State Board of Health and the Nassau County Department of Health [3] have conducted studies of accident fatalities over a period of years. The report forms used were not designed primarily to collect information concerning unsafe acts and unsafe conditions contributing to accidents, but these contributing factors were considered worthy of mention, and were included in the reports: slippery floors, loose rugs or carpeting, dark or poorly lighted hallways, defective heating equipment, and insecurely fastened screens.

The National Health Survey findings [4] indicated that accidents in homes are frequently the result of specific hazards associated with dilapidation and other factors involved in poor housing, and that frequency of home accidents decreased as the rent or value increased. It is realized that rent is not a good measure of environmental hazards, but it does help to measure poor housing environment. A rather interesting finding showed a 70 per cent increase in the accident rate as rent declined from $30 or more per month to less than $10 per month in rented multiple dwelling units.

The Cook County Study,[5] limited by nature of study to families in the lowest income group, showed that both mechanical and personal factors were included in approximately 64 per cent of the home accidents.

The Kansas and Nassau statistical studies indicated that 60 per cent of the fatal home accidents were due to falls, with falls on the same level exceeding falls from one level to another. Fire caused 14 per cent of the fatalities; 10 per cent were due to suffocation or strangulation; poisoning by gas, poisoning by liquids or solids, death from firearms, and drowning exceeded 2 per cent. In studying accident sites, it was found that the most dangerous place ". the home was the bedroom where 32 per cent of the accidents occurred. The second most dangerous place was the yard with 14 per cent of the fatalities. Inside and outside stairs together accounted for 13 per cent. The kitchen, living room, and bathroom followed in that order.

From the above studies, it appears that engineers can direct their efforts in home accident prevention into two main channels. One is the reduction or elimination of hazards either built into the home in the planning, design, and construction of the structure or added

thereto by the householder. The other is the control of hazards associated with the construction, installation, and operation of household appliances and equipment.

Home accidents due to collapse of a structure are few and far between and fade in significance when studied in relation to the contribution to accidental injury and death from specifically dangerous areas within the home. It has been agreed by eminent architects that it is as easy to build hazards out of, as into, a home. Stairs can be designed with treads of equal width, risers of equal height, a sturdy handrail, and a gentle slope so as to minimize falls; yet the householder by adding a torn rug or an insecurely fastened covering, can immediately make this stairway a hazard. Fireproof or fire stopping construction can localize fires. Electric outlets can be placed so that the chances of electrocution or burns are reduced, especially in bathrooms, laundry rooms, or wherever we have the combination of electricity and water. The design of sunken rooms with a half or full step between rooms presents a dangerous tripping hazard.

Household appliances and equipment have made household tasks easier and less wearing, but have, on the other hand, increased the exposure to new hazards. Careless operation of a gas range can convert it into a deadly weapon. Failure to provide a relief valve on a hot water boiler in a home in Detroit converted the boiler into a rocket which smashed through two stories of the home and landed a half block away.

Several hours could be spent in enumerating and illustrating the various environmental hazards in the home. Many are so simple that I need not expound them to a group of engineers, yet they continue to cause accidents to the householder who does not realize their danger or who considers that accidents always happen to the other fellow.

A comprehensive inspection form was developed recently as part of the Home Accident Demonstration Project in Kalamazoo, Mich. In this form, environmental hazards are itemized and safety standards are presented in detail so that they can serve, not only to indicate environmental hazards, but to assist in educating the householder in the recognition of unsafe practices in the home. I hope all of you will take the opportunity of becoming familiar with this form.

Safety is not merely a concept or a label. It is a way of living, whether it be in the home, on the street, in the school, or in a place of employment. Industry has greatly reduced its accident rates and fatalities through engineering and education to the extent that 65 per cent of fatal accidents to our labor forces now occur outside the plant. It is not enough to practise safety within the place of employment and then forget it immediately upon leaving there. It must be a 24-hour-a-day habit. By concentrating our efforts on the prevention of home accidents, we can extend the period of safety consciousness of each individual.

Accident prevention is not a new activity in environmental sanitation. Actually we cover safety to a varying degree in the activities of almost every current program. For example, in making an inspection of a water purification plant or swimming pool, the location of the chlorination equipment in a separate room, with adequate ventilation and a readily available gas mask is recommended. In sewage treatment plants we condemn use of open flame where exposure to gas is evident. Fire hazards, improper equipment and appliances in food establishments are observed and corrections suggested. The list is extensive, yet safety has been relegated to a minor role in an inspection, and safety in the home has not even been considered.

I am not recommending that we curtail or drastically cut our current public

health activities to concentrate solely on home accidents. I do recommend that while we are collecting a water sample or answering a nuisance complaint—the health department services most familiar to the public—we might well offer to make a home safety survey since the chances of injury or death are far greater from accidents than from typhoid or any of the enteric diseases. The safety survey might also bring to the attention of the people the activities actually provided by a health department. I am suggesting that, in view of our morbidity and mortality statistics, we reëvaluate the significance of our activities in order to concentrate our programs and our major efforts on the most vital problems.

Home accident prevention should be included in the activities of every health department. The engineering program could encompass such activities as the following:

1. Coöperation with home builders, contractors, and architects in order to improve the planning, design, and construction of new dwellings or remodelling of old ones.
2. Provision for a home builders' counselling service to families planning to build or remodel.
3. Securing the coöperation of hardware dealers in explaining safe operation and maintenance of equipment to the householder before the equipment is used.
4. Working with dealers of household appliances and plumbers on proper installation of equipment to eliminate the hazards commonly resulting from improper installation.
5. Obtaining the coöperation of manufacturers of household appliances and equipment to make them fool-proof.
6. Offering voluntary inspection services of the entire premises for safety hazards to anyone desiring such services. The form mentioned previously could be used as a guide for such inspections.

More research is needed on circumstances of non-fatal, as well as fatal accidents. As research presents up-to-date information on the relative significance of the various environmental hazards in relation to their contribution to morbidity and mortality, emphasis on control can be varied accordingly. Meanwhile we can utilize the knowledge at hand to guide us. A housing program incorporating the American Public Health Association housing appraisal survey affords an opportunity to coördinate a study of environmental hazards and the prevalence of home accidents. A rat control survey presents still another opportunity to tie in an inspection of this nature.

Because safety is a way of living, it must become an integral part of people's lives. It cannot be forced onto a community, but must be stimulated and fostered by the service we can offer in creating a safe environment in order to make the safe way of living a reality.

A home accident prevention program can and must be based on a policy of service to every individual in the community. By putting this program into effect, we will be instrumental in reducing the currently increasing contribution of home accidents to our national morbidity and mortality.

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Psychosomatic Approach to Venereal Disease Control*

Chronic Gonorrhea Repeaters

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RECOGNIZING the social implications of venereal disease, many workers in the field have been interested in seeking precipitating causes in the backgrounds of the venereally infected, or in finding clues which would help in making the program of prevention more effective. The problem has been approached from different angles, but all particularly seek answers to the question, "What traits appear characteristic of those persons who seem prone to the sexual promiscuity which leads to venereal disease?"

Venereal disease is not exclusively a medical problem. Recently sociologists and psychologists have been invited by medical men to aid in finding more effective curbs on these dangerous, contagious diseases, by making an attempt to raise the standards of social responsibility of the public through a more adequate understanding of the role of sex in human dynamics. To achieve these multiple goals, adequate techniques need to be devised leading toward deepened understanding. This, it is hoped, may lead to more effective educational and control methods.

In the treatment of venereal disease, the mental attitude of the patient must be considered. In many patients, venereal infection stirs up feelings of shame and panic. All the social disapproval of the civilized environment is directed against them. Their mental attitude may include all the frustration, guilt, and confusion which reflect poorly organized ego ideals.

The manner in which the patient is handled may be an important factor in his subsequent life adjustment. It may determine which alternative the patient chooses, (a) to handle his sex life more adequately and efficiently in the future, with a corresponding rise in social responsibility, or (b) to continue to make mistakes, deal haphazardly with the important sex factor in his social adjustment, and undergo repeated infections.

The literature contains only scant reference to this problem. One of the most complete studies was made in 1945 by venereal disease control officers in the Royal Canadian Army.[1] The study showed that venereal disease patients were largely of an inferior personality type. It was the conclusion of Watts and Wilson that if a man gets venereal disease infections two or more times, it

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is indicative of weakly organized personality, and the case should be thoroughly investigated by a psychologist or psychiatrist.

In a study made on fifty venereally infected female prisoners in England, venereal disease was recognized as a symptom of social maladjustment and psychiatric supervision or treatment suggested as a controlling factor in the prevention of further sexual promiscuity.[2] An interesting project undertaken at the San Francisco City Clinic in 1943 combined a psychiatric service with the city clinics in an effort to determine whether or not psychiatric help might be effective in diverting young women from venereally contagious situations.[3] It was felt that treatment and control potentialities might be better understood if a study of the characteristics of the patient was made. Three hundred and sixty-five women were referred to the Psychiatric Service where they were interviewed by psychiatrists and psychiatric case workers and given a psychological examination. A particular aim was to develop criteria for prognosis in good sexual adjustment and amenability to psychiatric treatment. Another study was made more recently in 1946 by Weitz and Rachlin at the Midwestern Medical Center at St. Louis, Mo.[4] With a staff of five psychologically trained workers, they made a psychological study of sexual promiscuity and venereal disease. Five hundred women patients in attendance at the clinic were observed and tests made over a 6 month period. Mental and educational retardation seemed commonly characteristic of the venereally infected group. The authors insist that the mental limitations of the average clinic patients be recognized and used to explain the usual difficulties met with, such as missed treatments,

TABLE 1

Showing Means for the Group of Fifty Gonorrheal Repeater Patients as to IQ's, Education and Age

Item	*No. Cases*	*Range*	*Mean*	*Median*
Intelligent Quotient	50	52-117	78.86	76.50
Age	50	20- 40	24 yr. 3 mo.	24
Education	50	4- 12	8 yr. 7 mo.	9

Range — describes the range in which the cases lie, showing maximum and minimum.

Mean — representing the average number for the entire group. This is found by dividing the total by the number of cases. This represents one sort of average, but should be compared with the median in most cases.

Median — representing the average derived by the individual who stands midway between the maximum and the minimum.

TABLE 2

Showing Environmental Characteristics of the Chronic Gonorrheal Infection Group of Fifty Patients

Item	*Number*	*Per cent*
Birth: Chicago	5	10
Mississippi	14	28
Other States	31	62
Abnormal Childhood	28	56
Only Child	11	22
Education: Grammar School or better	34	68
Less than eight years	16	32
Type of Work: Skilled	7	14
Unskilled	43	86
Irregular Work History	13	26
Heavy drinking	12	24
Known to Police	11	22
Living Alone	26	52
Physical Trauma (accident, serious illness)	13	26

broken appointments, and failure to report for follow-up service. These persons, for the most part, do not recognize the dangers connected with venereal disease to the individual and to society.

PRESENT STUDY

The workers at the Municipal Social Hygiene Clinic of the Chicago Health Department undertook to make a psychological evaluation of venereally dis-

TABLE 3

Showing the Marital Status of Fifty Patients Used in the Study

Item	*Number*	*Per cent*
Single	25	50
Married	25	50
Married with Children	17	34
Separated or Divorced (of married cases only)	15	60

TABLE 4

Showing Military Service Status of the Group

Item	*Number*	*Per cent*
Military Service	30	60
Medical deferment from Military Service	12	24
Psychiatric deferment from Military Service	2	4
Under age for Military	6	12

TABLE 5

Showing the Status of the Group According to Intelligence Quotients

Item	*Number*	*Per cent*
Intelligence:		
Bright Normal (110-120)	2	4
Average (91-110)	11	22
Dull Normal (80-90)	8	16
Borderline Defective (68-79)	13	26
Defective (below 68)	16	32
Total Below 90	37	74

TABLE 6

Showing Personality Characteristics of the Group of Fifty Patients According to Wechsler's Patterning

Item		*Number*		*Per cent*
Personality Trends:				
1. No personality maladjustment or psychopathic trends		17		34
a. Without mental retardation	7		14	
b. With mental retardation	10		20	
2. Tendency toward personality maladjustments		11		22
3. Positive Psychopathic Trends		22		44

TABLE 7

Comparison of Mental Deficiency Findings in Four Studies

		Number	*Per cent*
1. Watts and Wilson	VD Patients in Canadian Army	212	20
2. Lyon Study	Promiscuous VD females (intelligence findings on 105 only)	365	6
3. Weitz and Rachlin	Female VD Clinic patients	500	32.6
4. Present Study	Male Gonorrhea Repeater Clinic patients	50	32

eased patients. It was proposed that the first project would be the evaluation of chronic gonorrhea repeaters, that is, those patients who had had three or more gonorrhea infections within one year. This group of patients averages 30 per cent of all patients found in Chicago infected with gonorrhea. It has long been noted that such patients when coming to observation appear to be of lower than average intelligence. In discussing sexual problems with the patients, it was evident that they did not have a proper appreciation of their situation. Some of these patients who had more than three gonorrhea infections per year were referred for psychological interviews. It was hoped that this method would ascertain at what level of intelligence the patient was functioning and what his traits and characteristics would be.

This preliminary report summarizes the first phase of this project. The results included herein have been obtained on a total of 50 male patients between the ages of 20 and 40. Only 10 per cent of this group were native Chicagoans; the remaining 90 per cent had been residents of Chicago for an average of about 4½ years.

A short mental examination was administered in conjunction with the Wechsler-Bellevue Intelligence Test, Form I, excluding the vocabulary test. The results have been tabulated in percentages, as it was felt that this would be the most efficient method of handling the data. Means for the age, intelligence quotients, and education have also been presented.

RESULTS

It was found that the average age of the gonorrhea repeater frequenting our Municipal Social Hygiene Clinic was 24 years, that on the average such repeaters had a grammar school education or better, but that their intelligence quotient was below the established average of 90 to 110. In 56 per cent of the cases there was evidence of abnormal childhood conditions, such as death of one or both parents before the age of 15, separation or divorce of parents. It is possible that these factors may have contributed to the transitory habits of these patients, causing them to leave home early and seek the bigger cities.

There was an even distribution of married and single subjects, but it is of interest that, of the married group, as high as 60 per cent were separated from their wives or reported difficulties in their marital relations. Even among those patients who claimed that marital relations were good, there was a high frequency of extra-marital contacts. Such poor adjustment to married life would appear to be evidence of personality deficiencies.

Sixty per cent of the patients served in military units during the war. They did not seem to have benefited from the educational features which were part of the venereal disease prevention program of military life. The majority of the group, whether single or separated from their wives, lived alone and were employed in some type of unskilled labor. Twenty-two per cent had been known to the police at some time.

The Wechsler-Bellevue Intelligence Test showed 74 per cent to have an intelligence quotient of less than 90, noted by Wechsler as the lower limit of the average group. The largest single group was in the defective class (32 per cent), with IQ's below 68. Twenty-six per cent of the gonorrhea repeater group of patients showed intelligence of the borderline defective variety. There were 16 per cent in the dull normal category (IQ's of 80–90) while but 22 per cent achieved intelligence quotients in the average class (see Table 5). The mean for 50 cases was 78.86 with a median of 76.50. Both these figures indicate intelligence of the borderline defective type.

These results apparently concur with those of other investigators. Watts and Wilson, in their study of the venereal disease patients in the Royal Canadian Army,[1] found 20 per cent of the group to be mentally retarded. There are certain selective factors present in choosing army personnel, and not many individuals of low mentality are admitted into military service. In this study also it was noted that 95 per cent of the group were emotionally or intellectually handicapped. In fact, they were largely of the personality type known as psychopathic personality, that is, persons who, though apparently normal, are psychologically unable to make sound social or moral judgments. In the study of Weitz and Rachlin at St. Louis, Mo.,[4] 32.6 per cent of the group of 500 venereally diseased female patients showed a mental deficiency which warranted protective institutional care. The results of the various studies are compared in Table 7.

An attempt was made to evaluate the test results on the Wechsler-Bellevue Intelligence Test according to Wechsler's clinical patterns.[5] It was discovered that in 44 per cent of the cases, the patterns of the patients' performance on test items concurred with the group described by Wechsler as Psychopathic Personality. Twenty-two per cent showed a tendency to personality maladjustment.

We felt it would be expedient to divide the clinic patients into three groups:

1. Those showing no evidence of any psychopathic traits or personality maladjustments
   a. Without mental retardation
   b. Showing some mental retardation
2. Those showing a tendency toward personality maladjustments
3. Those showing definite psychopathic traits.

Then further treatment could be adjusted in accordance with the category in which the patient was classified.

CONCLUSIONS

The clinical group of gonorrhea repeater patients is below the average in intelligence. For this reason, a different approach in the health education program for venereal disease prevention and control is indicated. It is questionable whether persons who are mentally retarded and who have psychopathic personalities learn by experience or are amenable to common sense advice. The aim should be to provide guidance and supervision for at least the mentally retarded, including psychotherapy, depending upon the patients' capacities. It is also important that the educational material distributed should be supervised and checked by psychiatric workers so that it will be within the intellectual level of the recipients.

It is felt that Group 3 with the present limitations in knowledge of the treatment of psychopathy as well as the scarcity of adequately trained professional personnel would not be the group most productive of good treatment results in large V.D. clinics. However, persons in Groups 1 and 2 can probably be salvaged and improved by the correct approach, thereby decreasing the reservoir of infection. If Groups 1 and 2 were further classified as to intellectual level, therapy could still further be individualized. Patients who show evidence of personality maladjustments (Group 2) and who are of average intelligence, are in need of individual psychotherapy, and can probably benefit from psychological help and guidance in their social adjustment, recognizing that their sexual promiscuity is symptomatic of some underlying personality disturbance. Patients in Group 2 who are of defective intelligence might receive more benefit from group psychotherapy, in which an understanding of the venereal preventive measures and simple solutions to personality problems can be presented to the group. The difficulty of securing qualified personnel for group psychotherapy is not to be minimized. Likewise with Group 1, those with higher intelligence would receive individual therapy;

those of lower intellectual endowment may be reached by group psychotherapy.

The assistance of psychiatrists, psychiatric case workers, and psychologists in venereal disease clinics should be encouraged, and they should generally be given a place in the treatment of venereally infected patients. It is believed that these workers are able to contribute largely to the efforts of the patients to rehabilitate themselves. Further studies have been planned to show the invaluable aid which can be given by the psychiatrist who should see almost every venereally infected person before or after the somatic disease has been treated. By using a psychosomatic approach to the problem, a more complete prevention program probably could be effected.

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Johns Hopkins Reorganizes Medical Structure

According to an announcement recently made by President Detlev W. Bronk, President of Johns Hopkins University, Baltimore, the Johns Hopkins Hospital, Johns Hopkins University School of Medicine, and the School of Hygiene and Public Health, together with the Welch Medical Library will for the first time be combined under a single head to provide more effective integration of all medical activities.

Lowell J. Reed, Ph.D., who for the past three years has served as Vice-President of the University, in charge of medical affairs, has been named to become the administrative head to fill the newly created post of Vice-President of the Johns Hopkins University and Hospital. Dr. Reed currently is President of the American Public Health Association.

Among the common problems between the several institutions are a need for long-range financing, long-range planning of plant and facilities, joint research programs where there are common interests and common requirements of costly instruments and apparatus, and the medical care program which has been undertaken by the hospital.

Some Problems in the Recruitment and Training of Public Health Personnel*

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FEW, if any, will dispute the statement that the recruitment and training of personnel are probably the most urgent problems facing public health today. An adequate number of qualified personnel is required before we can improve and enlarge existing programs, develop new programs, and take full advantage of present public interest and support.

In a study made by the U. S. Public Health Service it was disclosed that a total of 2,587 positions remained unfilled in state health departments during the first six months of the fiscal year 1947–1948. A listing by professional classification of the unfilled positions is given in Table 1.

TABLE 1

Professional Classification	*Planned for 1947 Fiscal Year*	*Employed January 1, 1947*	*Positions Unfilled*
Total	*19,684*	*17,097*	*2,587*
Physicians	1,216	769	447
Nurses	2,138	1,747	391
Dentists	155	87	68
Sanitation personnel—			
Engineers	769	621	148
Others	1,451	1,247	204
Laboratory Personnel	1,644	1,494	150
Health Educators	214	169	45
Nutritionists	135	101	34
Medical Social Workers	167	132	35
Clerical, administrative, and fiscal personnel	7,711	7,000	711
Others	4,084	3,730	354

The shortage of medical and allied professional and technical personnel is not confined to the field of public health. Physicians, dentists, nurses, laboratory technicians, veterinarians, and other similar professional groups are greatly in demand for private practice, industry, federal and state governments, and hospitals. In securing information relative to our hospital licensing program we learned that, on the average, in hospitals under 100 beds, slightly over 50 per cent of the nursing care was provided by nonprofessional nurses. In hospitals over 100 beds, approximately one-third of the nursing care was given by nonprofessional nurses.

A major reason for the need for more public health personnel is the demand by the public for more public health services. As a result of the many technological advances of the last few years, the public has more time to interest itself in and make a study of such problems; and, in addition, has had more money to expend for such services. The accelerated interest of the last few Congresses bears this out, since the members of Congress reflect the attitude of their constituents back home.

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This awakened awareness upon the part of the public of a need for better public health services and the demands upon us, both in old and new programs, make it essential—if we are to discharge our responsibilities effectively — to secure good personnel and train them for their particular positions.

RECRUITMENT

There is no panacea for the relief of the recruitment problem. A suggestion I have to make is that we recognize our competitors for professional personnel and do everything we can to match their offers. Highly remunerative private practice, demands by industry, the expanded medical and allied professional programs within the federal government, and the expansion of our own state and local public health programs keep the well dry. Every effort should be made to meet the compensation schedules of private practice, industry, and the federal government. The fine example established by New York, California, and one or two other states in securing salary levels commensurate with the training and experience involved—even though they still are inadequate—has been of tremendous help to those of us in other states. I seriously question whether we can ever compete with private practice and industry in the matter of compensation; therefore, we must play up to the fullest extent the other advantages of public health, which to me and to you must be more attractive than salary or we would not be here today. I refer to such factors as a retirement plan, vacation with pay, sick leave, slightly more regular hours, opportunities for graduate training, a little more freedom in determining the special field in which the individuals may be interested, opportunities for research within these fields, and the satisfaction of knowing that they have done their part in making the community a better place in which to live. However important salary may be to you as an individual, it is obvious that the best measure of your success is not to be found in your bank balance, but is best shown by your personal development and the good you do your fellow men. This is not a philosophical treatise, but your very presence here today indicates that there are compensations other than salary which attract people to the field of public health. It would seem to be advantageous to place more emphasis in recruitment on factors such as service and security.

Continued progress is dependent upon the understanding and support of the public. This support stems from confidence in our administration. Confidence is earned by the efficient service we give. Our usefulness in the future, therefore, is in direct proportion to the service provided every day in every year by everyone. This means good personnel.

Our success in meeting new programs effectively will be in direct proportion to our ability to discharge present responsibilities more thoroughly and satisfactorily. We are spread too thin now. There are inherent dangers to our future unless we make heroic efforts to consolidate and perfect as we expand. The farmer who buys too much land and the builder who constructs too many houses without sufficient equity soon have their mortgages called and bankruptcy follows. Neither we nor the public can afford such bankruptcy in health. Only by giving careful thought and planning to improve the present, can we build safely and well for the future.

Each year we accept new responsibilities without giving sufficient consideration to the ultimate effect on the total program. In the last few years special programs and categorical grants in cancer, mental health, dental health, industrial hygiene, and now looming on the horizon heart disease, diabetes, and rheumatic fever have deluged us before our basic foundation is adequately and

firmly established. Public health people can appreciate how enormous the task of holding back the sea must have appeared to the little Dutch boy who placed his finger in the hole in the dike. It is appreciated that we cannot and should not divert the interest of the public and our legislative bodies from some of the health problems that are becoming increasingly important. It is recognized that these so-called "new activities" will, and, by their nature should, become integral parts of a well organized and effectively administered health department. However, the question with which we are confronted is: Can the machinery, which admittedly is not adequate for a lesser job, stand the strain of additional activity?

Before the age of high speed rail travel came into its own, it was necessary for the railroad companies to survey their road beds and rolling stock in order to determine whether they could safely engage in such an endeavor. Old style engines were replaced, road beds were leveled, and rails were placed in line. Perhaps the job facing public health in the future is one of securing better engines, leveling the road beds, and lining up the rails.

Admitting that the present shortage of physicians and nurses presents an added handicap in the recruitment of these two classes of personnel, we may as well be realistic and acknowledge that the increased enrollment in our medical and nursing schools of itself will not aid us materially. There are certain qualifications that serve as keys to unlock the doors for more public health physicians and nurses.

I shall refer to physicians in my remarks, but the same factors apply to nurses. The first key is the understanding and respect of public health by the medical profession. Public health is still the red haired stepchild of medicine —not as much as five years ago, but still a stepchild. Public health is referred to as a specialty of medicine, but saying this and seeing it in print does not make it so in the minds of the vast majority of physicians, the teachers in our medical schools, and the medical students. The latter, of course, reflect the active or passive opinions of the two former groups. The recent development of the American Board of Preventive Medicine and Public Health is a well merited recognition of the importance of public health in the field of medicine.

The respect and aggressive support of the medical profession itself must be secured. Editorials and passive acceptance by the leaders are not sufficient. The medical profession should have the same high esteem for public health as it has for obstetrics, surgery, ear-nose-and-throat, and the other specialties. Ours is a more difficult product to sell. There is not the operating room glamour that is attached to surgery or the immediate, tangible, and satisfying results of obstetrics. Neither is there the financial compensation these other specialties may have to offer.

It is essential that these obstacles be recognized and understood if the effort to resolve them is to be successful. The medical student, quite naturally, is more interested in clinical medicine than public health. The clinicians are the glamour professors. They are big names in the state; their reputations are well known; and they have the surgical room or the delivery table to reinforce their didactic lectures with direct, tangible evidence of the contributions of their specialty to saving lives.

Did you ever hear of a professor of medicine discussing heart disease from the preventive as well as the curative viewpoint? Does the average surgeon present the public health aspects of cancer in his lectures or, if he has heard of cancer control, does he believe it has a real relation to the diagnosis and surgical treatment of cancer? How many obstetricians are concerned with pre-

mature care, the high rate caesarean sections in some hospitals, and services available to the expectant mother from various community agencies?

I do not blame the clinical professors. It is not their fault. They received no understanding of public health during their undergraduate days and they have been too busy keeping pace with modern medicine to learn what this young upstart, public health, is and how it concerns them as physicians and teachers. I believe most strongly, however, that until these clinicians do gain an understanding of public health—how it may supplement or complement their services, and why the diagnosis and treatment of a condition may be only one phase of a problem, why the teaching of preventive medicine is a vital part of any course to medical students—then, and only then, will medical students begin to think seriously of public health.

There should be closer integration among the various clinical teachers in planning their courses in order that the students may learn the problem of a disease as it affects the whole organism. Too often the diagnosis, treatment, prevention, and socio-economic factors are presented in a totally unrelated manner and at widely dispersed intervals. Cancer is discussed by the internist; then the radiologist has something to add, possibly six months later; then the pathologist; and, finally, the surgeon. The patient is presented in separate slices, as a loaf of bread. It is difficult for the students to see and understand the whole, as well as the separate parts.

Medical students will not be much concerned with public health until the clinicians, whom they revere, teach public health and preventive medicine as an important phase of their specialty. These clinicians will not teach it until they become interested and understand public health. Such interest and understanding will follow respect for the subject and the members of this specialty. Respect will follow if we do our work so well that the public and the profession cannot fail to take cognizance of the contributions that public health and preventive medicine have made and can offer in the future.

I have taken an undue amount of time to discuss this factor of respect but believe it is one of the most essential objectives toward which we must strive. We say we must have the best of physicians for health officers. I believe this. The work merits only the best. But we will have to admit that some of our health officers on all levels are not what we would like to have. Some are there because they are too old for private practice, others because they have some physical disability and they have heard that health officers lead an inactive life, and still others are available because they have not had the knowledge or perseverance to meet the stiff competition of private practice. This may be putting it too bluntly and may even be exaggerating the conditions a little to stress the point. I do not mean to say that an individual should be discounted in the field of public health because he is old, has some physical handicap, or dislikes private practice. But if these are the only reasons he has for coming into the field, public health will suffer. As hard up as Indiana is for health officers, I have turned down several physicians for a given position because they fell in one of the three categories previously mentioned. The job is too important to be done in a haphazard manner. If the respect of the public and the profession is to be attained, the surest way of success is to have only the best of personnel; the surest way to fail is to accept whatever personnel is available.

Another way of securing more physicians for public health is improved teaching in the departments of public health and preventive medicine of our medical schools. Some of these teachers

have little or no interest in public health; they do not have the proper background of training and experience; and, even more important, they do not have the fire and zeal to sell their product to a group of uninterested medics. Teachers "with a foolish glimmer in their eyes" who can take these skeptics "up on the mountain and show them the promised land" are needed.

There are some examples of teachers in public health who prove this contention. Many of you recall Dr. Waller S. Leathers,* a man with considerable experience in public health, and, in later years, Dean of the Medical School at Vanderbilt University. The State Health Officer of Tennessee states that while Dr. Leathers was dean, ten per cent of the graduates of every senior class went into public health work in Tennessee.

Contrast this with the number who go into public health from most of our medical schools today or with the recent experience of the U. S. Public Health Service in which only two of a class of young commissioned medical officers indicated any desire to perform public health duties.

The Indiana State Board of Health, fortunately, is located on the medical center campus of Indiana University. Many of the staff have teaching assignments with medical, nursing, and dental students. In addition, clinics with the senior class were established approximately three years ago in which small groups of seniors meet with most of our divisional chiefs, both for informal talks and field trips. This enables the students to become familiar with the staff of the State Board of Health; to learn what our ideas and objectives are; what services are available to them; and, in addition, it gives us an opportunity to mention their responsibilities and obligations to the community as well as to the individual patient.

This procedure has aided in a limited degree in securing better rapport with the undergraduates, but it is too late and too little. The students are too well indoctrinated with clinical medicine by that time to have much interest in public health. The teaching of public health should begin early in the medical curriculum. There should be opportunities for these undergraduates to work in local public health departments. Such "on the job" experience will enable them to secure a clearer picture of public health activities and to become aware that there are many resources available to the patient and the physician.

It has been noted, too, that in many instances, when senior students indicated an interest in public health, such interest was lost by the time they finished their clinical internship. This was due to lack of contact with public health during their intern year. The dean of our medical school has suggested the possibility of public health experience as a part of a rotating internship. This would be on a voluntary basis and might serve to crystallize the interest of a few physicians in public health. Provision has been made to provide the Indiana University Nursing School with a public health nurse to serve as a part of its teaching staff with the hope that this nurse will be able to inculcate an understanding of, and an interest in, a public health program for these undergraduate nurses.

Efforts may have to be directed beyond the professional schools in order to secure individuals who will desire to enter public health. Vocational guidance, especially in the small schools, should prove useful in our recruitment program. I mention small schools particularly since the youngsters in such schools do not have as much opportunity for contact with professional groups and with industrial organizations as their urban cousins. For example,

* Deceased 1946

rural Indiana provides most of the teachers for our state. An interest in health as a career can be stimulated through the use of films and literature and followed up with personal contacts where necessary. This early indoctrination of high school students, together with proper rapport with youth councilors, may encourage many high school youngsters upon entering college to choose nursing, medicine, or one of the other professional fields with the ultimate objective of doing public health work.

The idea of going to university underclassmen for recruitment is proving effective in our sanitarian classification. A course leading to the degree of Bachelor of Science in Public Health has been established at Indiana University. The first three years of the course are given on the university campus and the last year at the medical center. The class is necessarily small and is recruited from a large number of interested underclassmen so that considerable selection is possible. The first such class of five men has just been graduated. They are especially fine men and were able to secure good positions at once in local and state health programs.

INTERESTING PEOPLE IN A CAREER IN PUBLIC HEALTH

What kind of people do we want in public health? It is essential to have not just physicians, engineers, and nurses, but "doers," teachers, aggressive and dynamic leaders with plenty of zest and enthusiasm. They must like people, enjoy working with people, and have an unusual amount of patience, tolerance, and perseverance. A desire for wealth automatically eliminates a career in public health—one just does not acquire that kind of money in public health.

Character and integrity are two essential traits for which no amount of training and experience can substitute. Loyalty, dependability, reasonableness, and plain common sense are additional assets to look for in our personnel. Absence of any or most of these characteristics is, in my opinion, sufficient grounds for refusing employment. Individuals without these cardinal traits will do more harm to public health than having the positions remain vacant.

The confidence and support of the public are founded upon their contacts with the individual worker in his or her daily routine. That is why extreme care must be exercised in the selection of these individuals. Everyone in public health needs to be a little bit of a missionary, a teacher, a salesman, and must have the patience of Job and the tolerance of Socrates.

TRAINING

All of us are guild conscious. This reflects itself in several ways. One example is the difficulty in securing an interest by the various professional groups in each other's programs. The engineer sees environmental sanitation but not chronic disease or bedside nursing. The physician does not see that he has a part in stream pollution or dairy programs. And so on through the other professional groups. One of my greatest concerns as an administrator is this lack of interest in and an understanding of three points by the personnel:

1. The overall objectives of the state or local program
2. The responsibility of each specialty to the whole program
3. The problems of public health outside the individual's own specialty

These are not easy objectives to achieve. The medical administrator has been largely to blame for lack of cohesion, and upon him lies the greatest responsibility for eliminating this stumbling block.

I believe strongly in staff meetings of all personnel — professional, technical, and clerical. Our program directors meet every two weeks. Points of general interest and concern are presented, and each

division chief has an opportunity to note problems that occurred in his program. Once a month, meetings are held for the entire staff.

Several months ago, one of our restaurant sanitarians was discussing a proposed ordinance before a city council. This led into a discussion of full-time health departments, but our sanitarian could not give detailed information on permissive legislation for the establishment of such departments. I firmly believe that the members of each professional group must have a working knowledge of the objectives and fundamentals of every other group. We cannot remain autonomous units under one administrative head if we are to succeed in improving public health in general.

Through the assistance of Indiana University, ten-hour courses in leadership and supervision are given at intervals to both professional and clerical employees. Inservice training, in my opinion, is more vital than preservice training. Individuals are more receptive and the discussions are more objective. Some of the objectives kept in mind in such inservice training programs are the following:

1. Review of facts already known for the benefit of everyone—providing a broader base for each individual.
2. Provide information to enable all to keep on top or ahead of new programs.
3. Instill an interest in fields other than own specialty.
4. Provide basic facts for securing an interest in other social problems of a community, such as education, welfare, recreation. (This is included with the thought that if we expect individuals in fields other than health to have an interest in our program, we, in turn, must demonstrate an interest in and an understanding of their problems.)
5. Evaluate objectives from time to time, together with the methods and techniques for attaining these objectives. The criteria of evaluation should be not that of numbers alone but of actual accomplishment.

USE OF AUXILIARY PERSONNEL

"Necessity is the mother of invention." Perhaps our inability to secure certain types of personnel, especially physicians and nurses, will lead us to make wider and more effective use of auxiliary groups. I believe there is a place for lay administrators in public health. They would serve as business managers or executive assistants. Their use in state health departments has increased in the last few years. Justification exists for their utilization in large local health departments to relieve the health officer of certain administrative details and allow him and his medical staff to use their training and skills where they will be most effective.

Practical nurses and nursing aids—or whatever name is finally given to nonprofessional nursing assistants—have been utilized effectively in hospital programs. There should be a place in public health for such individuals, especially where a bedside nursing service is a part of public health nursing. Sanitarians in environmental sanitation, dairy, and food programs have definitely found their niche in public health and are doing effectively what, in some instances, was being performed only by engineers a few years ago. If we do believe that such auxiliary personnel have a place in public health, we will have to provide training for them in order that their greatest usefulness can be realized.

CONCLUSION

If there is one answer to the recruitment of personnel for public health programs, it is to do better in our present everyday tasks. Nothing succeeds so well as success. Using our present knowledge and skills to their greatest efficiency will bring success. This, in turn, will bring with it respect and good personnel.

Progress is not accomplished overnight. There will be no clamoring at our doors tomorrow or the next day by worthy applicants. Aggressive leadership, sound planning, and hard work by

everyone are the answers. Remember Pasteur's statement, "They will tell you to try to prove that you are right; I tell you to try to prove that you are wrong." Let us beware of complacency. Let us see the wisdom of continual evaluation of our objectives, our methods, and our techniques. Let us work together, each with his special skills and experiences pooled for the common objective of improving the health of all the people.

Increased compensation, better personnel practices, sound teaching methods in the undergraduate and graduate professional schools, and training centers in good local health departments are adjuncts in our programs of recruitment and training to the main problem of doing today's job a little better. I am not concerned about the future if the present is successfully managed.

In the words of Carlyle, "Our main business is not to see what lies dimly at a distance but to do what lies clearly at hand."

Committee on the Hygiene of Housing

At a meeting of the Committee on the Hygiene of Housing, held in New York on October 29 and 30, it was reported that the third and final volume of manuals for the Appraisal of the Quality of Housing (dealing with the environment of the home) is in page proof and will shortly be available.[1] The entire appraisal procedure has now been endorsed by the U. S. Public Health Service which is sponsoring the use of the method and is prepared to train local health department personnel in its use (at Atlanta or in areas where special demand exists).

A final draft of Volume II of the Committee's Standards for Healthful Housing, dealing with Planning the Home for Occupancy, was approved for publication and should be available by the first of the year.[2] In this report, minimum space standards essential for healthful living are for the first time developed on the basis of the functional needs of the household; and the results, according to the Chairman, offer a direct challenge to the inadequate housing facilities now often provided under the guise of a false and delusive "economy." Volume III of this series, on the Construction and Equipment of the Home, should be completed during the first half of 1950. In the same period a draft of a standard code of housing regulations, which is being prepared under the leadership of Dr. Edward R. Krumbiegel of Milwaukee, should be ready for publication.

The committee also outlined a program for a series of special research projects, to be undertaken if additional funds can be secured. These projects include: a systematic check and evaluation of the appraisal procedure, to identify its most significant items, with regard to possible simplification; a study of the hygienic and social results of the re-housing of slum populations; and the preparation of a monograph on Housing for the Aged and the Infirm, a subject of major importance, and one which has so far been neglected in this country.

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The Inadequacy of Routine Reporting of Fetal Deaths*

As Evidenced by a Comparison of Such Reporting with Maternity Cases Paid for under the Emergency Maternity and Infant Care (EMIC) Program

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PUBLIC health workers for many years have been greatly concerned with the reduction of infant mortality. Important as such reductions are, it is becoming increasingly clear that the saving of lives lost *after* birth is only part of the problem of preventing loss of life in this period. Thousands of prospective lives are lost each year through deaths of viable infants born at or near termination of pregnancy, representing a tremendous wastage of pregnancy. For example, in 1947 the number of infant deaths (i.e., deaths within the first year of life) reported in New York City was 4,517, while the number of fetal deaths reported was 14,077. Bringing a larger number of these fetuses to a later stage of pregnancy enhances the chances for a live birth. More and more, then, it becomes important to focus on the problem of fetal deaths.

Before attacking the problem, one has to know the extent of it. Many attempts have been made in different countries and within the United States to obtain registration of fetal deaths. There is a lack of uniformity of the definition of the term "fetal death" in the literature, with variations in length of gestation, signs of life, and period allowed for registration of the fetal death. The indiscriminate use of the terms "stillbirth," "abortion," "miscarriage," and "fetal death" has added to the already existing confusion. For example, the minimum period of gestation after which a stillbirth must be reported is 28 weeks in England and Wales, 24 weeks in Belgium and Switzerland, 26 weeks in Czechoslovakia, 32 weeks in Norway, 29 weeks in Denmark, 16 weeks in Japan, and is not specified in France, Italy, and Belgium.[1] In the United States, there is similar variation from state to state. There is likewise no agreement regarding evidence of life. The following terms are loosely used—"any sign of life," "signs of life," "sign of breathing," "breathed or any sign of life," "action of heart, breathing or movement of voluntary muscle."

Several countries consider a "stillbirth" a child born alive but dying within the period of registration, meaning the lapse of time between birth of a living child and registration with the health authorities as a stillbirth if the child dies; this period may vary from

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one to six days after birth. It is thus apparent that the comparison of fetal death statistics from country to country and within the United States is of little significance at the present time.

If one attempts to study the problem in one community, he is immediately faced, as well, with the problem of knowing how completely stillbirths or fetal deaths, no matter what definition is used, are reported to registrars of vital statistics by the physicians and hospitals in the community.

In an attempt to estimate total pregnancy wastage, the Board of Health of New York City on January 1, 1939, amended the Sanitary Code[2] and required the reporting of all fetal deaths regardless of length of gestation. A fetal death was defined in the 1939 amendment as a "stillbirth or a fetus delivered at an abortion (spontaneous, therapeutic or induced), that is, a fetus born dead, including a fetus recovered at operation in a case of ectopic gestation, by caesarean section, and a hydatid or hydatiform mole delivered spontaneously or by operation." Table 1 shows the marked increase in reporting of fetal deaths after this amendment of the Sanitary Code was enacted.

TABLE 1

Reporting of Fetal Deaths in New York City

Year	*Number of Fetal Deaths*	*Ratio to 1,000 Live Births*
1898	5,638	47.4
1908	7,191	49.3
1918	6,793	49.2
1928	6,121	48.5
1938	4,995	48.9
1939	6,831	66.8
1940	7,986	74.4
1941	8,974	78.5
1942	10,013	75.9
1943	9,508	70.7
1944	9,987	81.4
1945	10,367	80.5
1946	12,980	85.0
1947	14,077	82.2

With this increase, the reporting of fetal deaths in New York City was recognized as being much more complete than in most areas. No simple way of testing the completeness of this report ing, however, was found until the EMIC program* made one available.

Under the regulations of that program, a physician or hospital or both were required to file a brief summary of the medical course of the patient prior to payment by EMIC. When these EMIC summaries were tabulated, it was found that there were 2,045 pregnancies in 1943, 1944 and 1945 which terminated in a fetal death. A search was then made to see if a fetal death certificate was filed with the New York City Department of Health for each of the 2,045 fetal deaths. It was found that a certificate was filed for 1,147 or 56 per cent; no certificate was filed for 898 or 44 per cent. It was thus evident that the reporting of fetal deaths in New York City did not give a complete picture of total pregnancy wastage, since approximately 50 per cent were unreported.

Since additional data were available on the unreported fetal deaths, they were analyzed to determine the role played by various factors which might influence reporting—the place of occurrence of the fetal death, the type of physician attending the patient, and the length of gestation.

PLACE OF OCCURRENCE OF EMIC FETAL DEATHS

Section 32 of the *Sanitary Code* of New York City requires that a physician, hospital superintendent, midwife, funeral director, or parent report the fetal death; reporting by a parent is required only if the fetal death occurred unattended. It is obvious that when the fetal death occurs in a hospital, the responsibility for reporting is shared by the hospital superintendent and the physician. The chances of reporting should, therefore, be better than in an attended fetal death occurring at home

* A federally supported program through which maternity care was provided free of cost to the wives of men in the four lowest pay grades in the armed forces. Women reported early in their pregnancies in many instances.

TABLE 2

Place of Occurrence of EMIC Fetal Deaths in New York City

Place of Occurrence	Total	Number of EMIC Fetal Deaths		Per cent Not Reported
		Reported	Unreported	
1. Hospital (Total)	1,942	1,135	807	42
a. Voluntary	1,046	595	451	43
b. Municipal	515	253	262	51
c. Proprietary	358	281	77	22
d. Other *	23	6	17	74
2. Home	103	12	91	88
Totals	2,045	1,147	898	44

* Includes fetal deaths occurring in federal hospital, or patients transferred from one hospital to another.

where reporting rests with the physician alone.

Table 2 shows that when fetal deaths occur at home, they are usually unreported; when they occur in hospitals, about 42 per cent are unreported. The relatively better reporting of fetal deaths by proprietary hospitals should be interpreted in the light of a procedure whereby the Department of Hospitals, which licenses only these hospitals, requires that they furnish certain medical data, including the number of fetal deaths occurring each year, before a license is renewed. These records are then checked to determine whether the deaths have been reported to the Department of Health.

TYPE OF ATTENDING PHYSICIAN

Both the obstetric specialist and the general practitioner failed to report many fetal deaths, even though their cases were better reported than those of other specialists and ward cases. The chief point is that physicians of all kinds should report fetal deaths more carefully and completely. The incidence of such deaths should be reduced as the quality of antepartum and intrapartum care is improved. But the facts cannot be known unless figures on all terminated pregnancies are available.

LENGTH OF GESTATION

The third possible factor in completeness of reporting—and which one supposes would be of great influence—is the time of gestation at which the fetal death occurred. Did physicians and hospitals really understand the term "fetal death" to mean a fetus dying at any time during pregnancy?

Table 3 shows that reporting increases with the length of gestation. Evidently the term "fetal death" was usually interpreted by physicians in terms of the word "stillbirth," with which they were familiar and which usually means a death occurring in late pregnancy.

TABLE 3

Trimester of Pregnancy in Which the EMIC Fetal Deaths Occurred

Trimester of Pregnancy	Total	Number of Fetal Deaths		Per cent Not Reported
		Reported	Unreported	
1st Trimester	858	287	571	67
2nd Trimester	386	253	133	34
Reported as "early"	68	68	0	0
3rd Trimester	559	480	79	14
Reported as "late"	2	2	0	0
Unknown	172	57	115	67
Totals	2,045	1,147	898	44

DISCUSSION

It has been demonstrated that the reporting of fetal mortality is quite incomplete, roughly 50 per cent as judged by this study. Thus, the 14,000 reported fetal deaths in New York City in 1947 may represent at least an estimated total of 28,000 fetal deaths during this period. In order to secure an adequate picture of the volume of pregnancy wastage, physicians and hospital administrators have to be made aware of the need for reporting all fetal deaths to the vital statisticians in their communities.

It is interesting that the reported fetal death ratio of 82.8 per 1,000 live births in 1947 is as high as the infant mortality rate was in 1920. Since then the infant mortality rate has dropped to a low of 26.4 for the years 1947 and 1948. It is recognized that the decrease in infant mortality was due to many factors—improvement in community water supplies, pasteurization of milk, better medical and nursing care during pregnancy, delivery, and infancy, etc. With the decrease in certain causes of infant mortality, a shift in the cause of death has also occurred, and today other causes which are natal in origin—such as premature birth, birth injury, and congenital malformations—now play a major role, indicating the increasing importance of antepartum and intrapartum care. One would hope that reductions in fetal mortality might be achieved by directing attention to factors such as the quality of antepartum and intrapartum care, nutrition of the expectant mother, socioeconomic status, education of the public as to the importance of early and adequate antepartum care; certainly guided family planning cannot be ignored. It must also be pointed out, however, that some of the fetal deaths are not preventable and that their occurrence is actually biologically desirable. Thus, by early termination of certain pregnancies, the species rids itself of genetically unsound combinations, the so-called lethal or semi-lethal combinations. Our knowledge of human reproduction is still extremely limited and further studies, including large-scale longitudinal studies of "pregnancy wastage," are badly needed.

CONCLUSIONS

1. Forty-four per cent of fetal deaths resulting from pregnancies in which medical care was paid for by the EMIC Program in 1943, 1944, and 1945 were not reported as fetal deaths to the registrar of vital records in the Department of Health in New York City, where the reporting of all fetal deaths (i.e., any products of conception) has been rigorously promoted for the past decade.

2. In this EMIC fetal death series, reporting was more complete when the death occurred in the latter months of pregnancy and when the birth occurred in proprietary hospitals which are under closer governmental supervision than other hospitals.

3. There is need for further studies in the field and for greater interest of the medical profession in securing more complete reporting.

4. Uniformity in definition of terms, "stillbirth," "fetal death," "abortion," and "miscarriage," and more complete reporting of such deaths are essential before an adequate picture of the problem of pregnancy wastage is available.

REFERENCES

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Use of Antibiotics in the Presumptive Medium for Water Analysis

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THE shortcomings of lactose broth as a presumptive medium in water analysis are well known. Its inadequacies fall into two general categories (1) the false positive, and (2) the false negative.

False positive results are obtained when non-coliform organisms produce acid and gas in lactose broth in 48 hours. *Clostridium welchii, Bacillus macerans,* and *Bacillus polymyxa* are often associated with false positive presumptive tests by virtue of their ability to produce acid and gas from lactose; when synergistic gas production occurs the fecal streptococci are usually found as one member of the pair.

False negative results in lactose broth occur when non-coliform organisms overgrow the coliforms and prevent gas production or prevent coliform isolation in the confirmatory medium, once gas has been produced by coliforms. It might be mentioned that the false negative result has often been overlooked in water analysis. Yet, in the false negative the error is on the dangerous side, because coliforms, although present in the original water sample, are not detected.

In an attempt to eliminate false positive and false negative presumptive tests, bacteriologists have developed a great number of presumptive media containing substances which inhibit undesired organisms. Despite increased selectivity for coliform organisms, none of the selective media have proved to be satisfactory substitutes for lactose broth, and only one, lauryl broth, has been approved by the Committee on Standard Methods as an alternate presumptive medium.

The use of antibiotic substances suggests a new approach in the search for a more desirable presumptive medium. It is well known that substances, such as penicillin and tyrothricin are inhibitory to Gram-positive organisms and that Gram-negative organisms are relatively resistant.[1] The problem presents itself as to whether an antibiotic substance could be added to lactose broth in such concentration as to prevent the growth of the Gram-positive organisms while at the same time allowing full development of coliform bacteria. Both penicillin and tyrothricin have already proved valuable as inhibitory agents in selective media.[2-6]

In the present work, penicillin, tyrothricin, and streptomycin were considered as substances which might possibly be of value in the elimination of false positive and false negative reactions when incorporated into the lactose broth presumptive medium. The sensitivity of coliforms, *C. welchii,* the aerobacilli (*B. polymyxa* and *B. macerans*), and the enterococci to each of the antibiotics was determined; media containing these antibiotics were then prepared and tested in actual water analysis.

EXPERIMENTAL

Determination of antibiotic sensitivity of significant organisms—Representative

* With the technical assistance of Martin E. Ward.

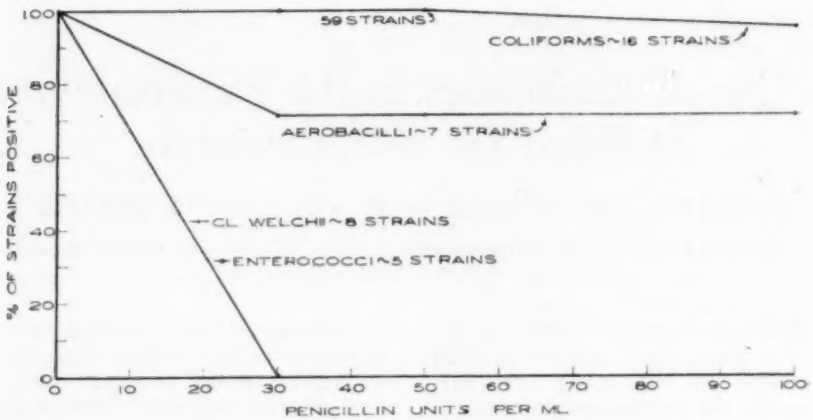

FIGURE 1. Per cent of strains of coliforms, aerobacilli, enterococci and *C. welchii* giving positive tests in lactose broth containing various quantities of penicillin.

strains of coliforms, enterococci, aerobacilli, and *C. welchii,* isolated from natural sources and also obtained from stock culture collections of laboratories throughout the country, were used for antibiotic titrations.

Lactose broth was prepared according to directions in *Standard Methods for Examination of Water and Sewage*[7] and dispensed in test tubes in 2.5 ml. amounts. After sterilization, and just before inoculation, the antibiotics were added in sufficient amount to give the desired concentration. Regardless of the concentration, tyrothricin was added in 0.05 ml. of 95 per cent ethyl alcohol, penicillin in 0.5 ml. distilled water, and streptomycin in 0.05 ml. distilled water. In each titration, lactose broth and lactose broth plus solvent were inoculated as controls. To prepare the inoculum, each organism to be tested was transferred every 24 hours on three successive days. Each tube received an inoculum of 0.05 ml. of the 3rd 24 hour lactose broth culture. All tubes were incubated at 37° C. for 48 hours, and readings were made at 24 and 48 hours. The presence of acid or acid and gas was recorded. A positive result was defined as the production of gas in any quantity at the end of 48 hours; but in the case of the enterococci, acid alone was termed a positive result. *C. welchii* cultures were incubated in an anaerobic jar, using Rosenthal's[8] chromium-sulfuric acid method.

Titration results for penicillin and tyrothricin are found in Figures 1 and 2. Since the coliform and non-coliform organisms had about the same sensitivity ranges to streptomycin, it was concluded that this drug would be of no value in the problem at hand, and therefore streptomycin results are not shown.

One of the 16 strains of coliforms tested was inhibited at 100 units of penicillin per ml.; none of these and none of 43 additional strains tested was inhibited at 50 units. All *C. welchii* and enterococcus strains were inhibited at 30 units of penicillin, but 5 of 7 aerobacillus strains were unaffected by concentrations up to 400 units per ml.

The results with tyrothricin were similar; all 45 coliform strains were positive in 100 μg. per ml.; all *C. welchii* and enterococcus strains were inhibited by 30 μg. or less, while 4 of the aerobacillus strains gave gas in the presence of 50 μg. per ml.

From these data it would appear that

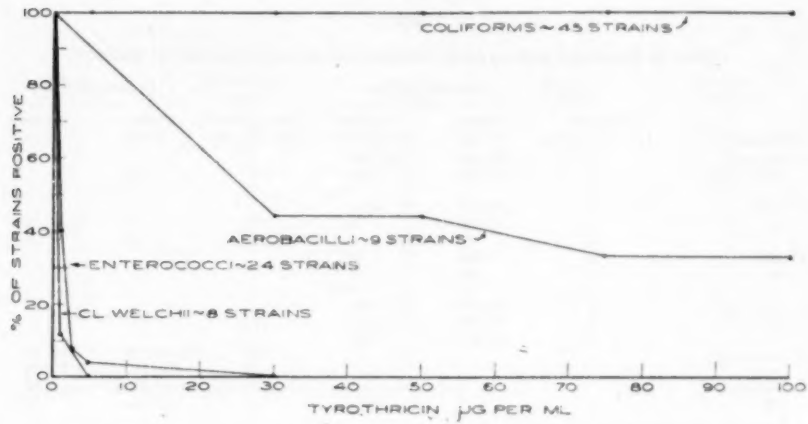

FIGURE 2. Per cent of strains of coliforms, aerobacilli, enterococci and *C. welchii* giving positive tests in lactose broth containing various quantities of tyrothricin.

the addition of between 30 and 50 units of penicillin or 30 to 100 µg. of tyrothricin per ml. of lactose broth would result in a medium that would eliminate false positives due to *C. welchii* and enterococci and part of those due to the aerobacillus group, without inhibiting gas production by coliforms.

The technique employed in the above titrations resulted in an inoculum of approximately 2×10^7 cells of the test organisms per tube. In water analysis one deals not with millions or even thousands of organisms in the presumptive tubes but with significantly smaller numbers. Since the effect of many bacteriostatic and bactericidal agents is a function of the number of cells exposed, it was of importance to test the effect of tyrothricin and penicillin when smaller inocula are used.

For testing the effect of antibiotics on smaller inocula the most sensitive and most resistant strains were used. *Escherichia coli* 26 and *E. coli* W (both from the Army Medical School collection) were sensitive to 100 units but not to 50 units of penicillin per ml.; *Aerobacter aerogenes* A.T.C. 8308 and *Bacillus macerans* 888 (obtained from Dr. N. R. Smith) were unaffected by 418 units per ml. *B. polymyxa* 1A and 1B (fresh isolates) were resistant to 100 µg. per ml. of tyrothricin. Cultures of each organism were prepared in the manner previously described. The cultures were then diluted in 99 ml. water blanks to $1:10^{10}$. Plate counts were made from bottles representing $1:10^6$ and $1:10^8$ dilutions of the original cultures. Tubes containing lactose broth, lactose broth plus antibiotic, and lactose broth plus solvent were inoculated with 0.05 ml. from each dilution of the original culture. Cultures were incubated and read as previously described. The size of each inoculum was calculated from the plate counts. Results are presented in Table 1. Because of the technique used there is a hundred-fold difference between positive and negative results, no data being obtained on intermediate points.

It can be seen that, in general, a larger inoculum was required in the presence of either antibiotic than in the control to obtain positive results. In each case, a smaller number of coliform organisms was needed for positive results with tyrothricin present than with either of the penicillin concentrations tested.

TABLE 1

Effect of Bacterial Numbers on Gas Production in Lactose-antibiotic Media

Organism	Penicillin Conc. Units/ml.	Bacteria per Tube: Positive Results *	Bacteria per Tube: Negative Results †	Tyrothricin Conc. μg./ml.	Bacteria per Tube: Positive Results	Bacteria per Tube: Negative Results
A. aerogenes	50	1,700,000	17,000			
ATC 8308	30	10,000	100	100	100	1
	0	1	0.01	0	1	0.01
E. coli	50	500,000	5,000			
26	30	3,000	30	100	50	0.5
	0	50	0.5	0	50	0.5
E. coli	50	6,000	60			
W	30	1,300	13			
	0	60	0.6			
B. macerans	50	750,000	7,500			
888	30	250,000	2,500			
	0	250,000	2,500			
B. polymyxa				100	65,000,000	650,000
1A				0	650,000	65,000
B. polymyxa				100	28,500	285
1B				0	28,500	285

* Size of smallest inoculum tested giving a positive presumptive test.
† Size of largest inoculum tested giving a negative presumptive test.

The very large inocula of aerobacilli required to give a positive presumptive in the presence of either antibiotic in the medium suggests that these organisms would give very little difficulty in actual water analysis. On the other hand, since both penicillin and tyrothricin apparently have some inhibitory effect on the coliform strains used, one might expect some false negative results to arise when examining water containing small numbers of coliforms using media containing the antibiotics. In order to get a better measure of the inhibitory effect a more quantitative experiment was done.

E. coli 26 was used. Suitably prepared 24 hour cultures were diluted in sterile distilled water in such a manner that the inoculum finally used approximated a single cell. Five runs were made, each with a different sized inoculum. From each different dilution, a series of lactose broth and tyrothricin lactose broth tubes were inoculated, each tube containing 2.5 ml. of lactose broth and receiving 0.05 ml. of the diluted culture.

The number of cells introduced per tube was determined by making ten replicate plate counts from the culture dilution used. Thus, in one instance there was an average of 6.2 organisms per ml. in the diluted culture, and since 0.05 ml. was used in each tube, the calculated inoculum was 0.31 organisms. It may appear incongruous to speak of an inoculum of less than one organism per tube. This merely indicates, however, that if there were even distribution of the organisms in the dilution blank and if each viable cell were to grow in the new medium, then one hundred tubes tested with this inoculum should produce 31 positive tests.

Table 2 shows that in both media the percentage of positive tests increased with the size of the inoculum. In no case was the percentage of positive tubes as high in the antibiotic medium as in lactose broth, but, even in the control medium, the recovery never reached that which would be predicted from the size of the inoculum as determined by the plate count. At concentrations between 25 and 75 μg. per ml. of tyrothricin the recovery was apparently independent of the antibiotic concentration.

In Figure 3 the percentage of positive tubes has been plotted against the inoculum. Tyrothricin results represent a summation of all concentrations tested in each dilution. Each of the experimental curves has been extended by

TABLE 2

Production of Gas in Tyrothricin Lactose Broth by Small Inocula of E. coli 26

Bacteria per Tube *	Tyrothricin µg./ml.	Number of Tubes	Number Positive	Per cent Positive
0.31	75	50	3	6
	0	50	8	16
0.45	100	10	0	0
	75	10	1	10
	50	10	1	10
	25	10	1	10
	0	10	3	30
0.69	75	25	1	4
	50	25	1	4
	25	25	4	16
	10	25	1	4
	0	50	29	58
1.28	25	25	2	8
	0	25	12	48
1.75	75	50	18	36
	0	50	45	90

* Average of ten replicate plate counts of culture dilution used.

inspection so that it intersects a line parallel to the horizontal axis corresponding to 100 per cent positives. In addition, a theoretical curve has been drawn showing the percentage of positives which would be expected under ideal conditions, i.e., perfect distribution and growth of each cell in the new medium.

With reference to Figure 3, it can be seen that 100 per cent positive tests in lactose broth would be predicted with an inoculum of 1.8 organisms per tube as compared to an inoculum of 2.4 in the antibiotic medium. Failure to attain complete recovery of coliforms in either medium can be traced in part to the distribution error and in part to inherent physiological differences in the individual cells of the culture. Whatever the reason, it is apparent that the antibiotic medium is somewhat more inhibitory to test organism than lactose broth; in actual water analysis such an effect might result in false negative results with waters of low coliform density. Due to the effect of other organisms it is probable that in natural waters a still greater number of coliforms would be required to produce 100 per cent positives in either medium. The question arises as to whether the antibiotic would render the medium sufficiently more selective than lactose broth to compensate for the undesirable effect of coliform inhibition.

Only a single coliform strain was tested in this fashion, but, since the strain used was the most sensitive to tyrothricin in our collection, it was felt that the inhibitory effect was of sufficiently low order to warrant a test of tyrothricin lactose broth in routine water analysis. This portion of the work was exploratory in nature and no attempt was made to treat the data in a rigorous statistical manner. It is suggested that the technique described might prove valuable in testing other proposed pre-

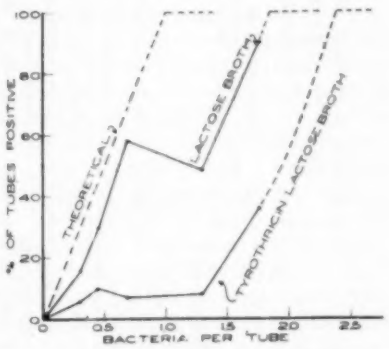

FIGURE 3. Per cent of positive presumptive tests given by very small inocula of *E. coli* 26 in standard lactose broth and tyrothricin lactose broth.

TABLE 3

Analysis of 97 Water Samples (48 Raw, 49 Treated) Using Standard Lactose Broth, Penicillin Lactose Broth, Tyrothricin Lactose Broth and 2 Per cent Brilliant Green Bile Broth for the Presumptive Test and E.M.B. Agar as the Confirming Medium

	Raw Water Samples				Treated Water Samples				All Water Samples			
	SLB *	BGB	PLB	TLB	SLB	BGB	PLB	TLB	SLB	BGB	PLB	TLB
Presumptive positive tubes	154	87	107	90	71	36	30	19	225	123	137	109
Presumptive tubes completed	84	66	69	38	16	19	13	3	100	85	82	41
Per cent of positive tubes completed	54.5	75.7	64.3	42.2	22.5	52.8	46.6	15.8	44.4	69.1	60.0	37.6
Positive water samples †	35	25	29	21	10	10	7	3	45	35	36	24
Per cent of total positive water samples ‡	89.7	64.1	74.3	53.8	50.0	50.0	35.0	15.0	76.3	59.3	61.0	40.6

* SLB—standard lactose broth; BGB—2 per cent brilliant green bile; PLB—penicillin lactose broth; TLB—tyrothricin lactose broth.

† Number of water samples that gave at least one positive confirmed or completed test.

‡ Ratio of positive samples detected by a medium to total positives detected by all media (total positive water samples detected; raw 39, treated 20, total 59).

sumptive media, as it gives a ready means of evaluating the maximum efficiency of any such medium.

The use of antibiotic media in routine water analysis—Samples taken from the Los Angeles Water District were tested. On the basis of the work in the preceding sections, lactose broth plus 25 μg. of tyrothricin per ml. and lactose broth plus 30 units of penicillin per ml. were used. In addition, standard lactose broth and 2 per cent brilliant green bile broth were used as controls. For all water samples, five tubes of each of the four media were inoculated; 10 ml. of the water being added to 10 ml. of double strength medium. All tubes were incubated at 37° C. for 48 hours and were examined at frequent intervals for gas production. As soon as gas in any quantity was detected a subculture was made by streaking on an eosin methylene blue agar plate. The plates were examined after 24 hours, and where typical *E. coli* or *A. aerogenes* colonies were found, a positive completed test was assumed. Where only atypical colonies were observed the standard completed test was run. A total of 48 raw water and 49 treated water samples were examined. The data obtained are summarized in Table 3.

The tyrothricin broth is obviously inferior to the other broths as to recovery of, and selectivity for, coliforms. Of the other three media, the standard lactose broth yields the greatest number of positive completed tests but has the lowest per cent of presumptive tests completed. This relationship arises from the greater number of coliform recoveries in lactose broth from raw water samples, since with treated waters brilliant green bile medium gave more positive completions. The results with brilliant green bile broth and penicillin lactose broth were about the same in regard to total positive completions, the former yielding slightly higher numbers from treated waters and the latter showing a few more positives from the raw waters. The brilliant green

bile broth was more selective, giving a higher per cent of presumptive tests completed with both types of water.

A slightly different picture is obtained when the results are considered in terms of positive waters detected. If a "positive water" is defined as one which yields at least one positive completion, regardless of the medium in which it occurred, then standard lactose broth gave 45 positive waters, brilliant green bile 35, penicillin lactose broth 36, and tyrothricin lactose broth 24. Fifty-nine positive water samples were detected from the four sets of media. No one medium found all the positives in either group. Lactose broth gave the highest results (89.7 per cent) followed by penicillin lactose broth (74.3 per cent) for the raw waters; lactose broth and brilliant green bile broth gave the same results for the treated waters (50 per cent).

DISCUSSION

It would seem from the data that the particular antibiotic containing media used offer no advantage over the standard lactose broth as a presumptive medium. Retaining the principle of an antibiotic as a selective agent, the most obvious change that could be made in the formulas of the media is the antibiotic concentration. Surprisingly enough it is hard to predict in what direction the change should be made. Increasing the concentration could result in the inhibition of more sensitive coliform strains with consequent lower recoveries; decreasing the concentration could result in more presumptive positives but might also decrease the total coliform recoveries because of the overgrowth of complicating organisms not inhibited.

From the titration data in the first section of the paper one might have expected a greater selectivity of the media and a higher coliform recovery. The data from actual water analysis emphasizes the fact that the activities of mixed flora cannot be predicted from pure culture studies. Along with the direct effects of the non-coliforms on the coliforms in water, there is the added effect of the microflora on the antibiotics themselves. The existence of organisms in nature that inactivate penicillin is well known, and, although as yet unreported, similar ones destroying tyrothricin are far from unlikely. These factors further complicate the logical selection of proper antibiotic concentrations and make it evident that future studies in this direction would be strictly empirical.

Other changes beside antibiotic concentration might result in a more valuable presumptive medium, such as changes in the sugar or peptone concentration, the use of a more selective nitrogen source than peptone, the incorporation of materials like cacotheline and hydroquinone to inhibit Gram-negative non-coliforms, and the use of a buffer in the formula. It is obvious, of course, that these changes could be studied with equal benefit in relation to any of the numerous media already in use or proposed for the presumptive test.

The data can also be discussed from a broader viewpoint. It has been seen that no one medium detects all the positive water samples whenever a relatively large number of waters are being tested. In fact, the larger the number of media the more positive waters are detected. This, of course, is partly due to the increased amount of water which must of necessity be tested as the number of media are increased, but other factors are also involved. When a single water will give 4 confirmed positives out of 5–10 ml. samples in a single medium and fails to show as many as one in the 15 tubes of the other three media each containing 10 ml. of the same water then random distribution or increased amounts of water tested cannot explain the results. This situation, and others quite similar, were observed in individual waters in the series, and there was at

least one instance in which each of the four media used was significantly superior to the other three.

One might state the obvious truism that no two samples of water are exactly alike. It may be that each water, or closely related type of water, demands a unique medium for perfect analytical results based on the coliform density. Should this hypothesis approach the existing situation, then the search for the "perfect presumptive medium" becomes the search for the philosopher's stone. Might it be suggested that any marked improvement in the methods for the sanitary examination of water demands an entirely new approach?

SUMMARY

The addition of antibiotic substances to lactose broth has been considered as a possible means of increasing the efficacy of the presumptive medium in water analysis. Sensitivity of coliforms, aerobacilli, enterococci, and *C. welchii* to penicillin, tyrothricin, and streptomycin was determined. With pure cultures appropriate concentrations of penicillin or tyrothricin could be chosen so as to suppress the aerobacilli, *C. welchii*, and enterococci without appreciable inhibition of coliforms.

Ninety-seven water samples were tested (48 raw and 49 treated), using lactose broth containing 25 μg. per ml. tyrothricin and lactose broth plus 30 units per ml. penicillin as presumptive media; standard lactose broth and brilliant green bile broth (2 per cent) were used as controls. Penicillin lactose broth was less sensitive (fewer positive completed tests) but more selective (a higher per cent of positive presumptive tests completed) than standard lactose broth. With reference to brilliant green bile broth, the penicillin medium was equally sensitive but less selective. Tyrothricin lactose broth was inferior to the other three media in both respects. No medium detected all the positive water samples.

It is concluded that modifications in the present formulation of the antibiotic media will have to be made if they are to be of practical value in water analysis.

ACKNOWLEDGMENTS—The authors are grateful to Mr. Harry G. Neumann of the Los Angeles Department of Water and Power for providing the water samples. They also wish to express their appreciation to Drs. Max Levine, L. S. McClung, H. Katznelson, N. Kramer, E. S. Wynne, and N. R. Smith who supplied some of the cultures tested.

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Public Relations in Public Health*

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PUBLIC health is big business. Federal, state, and local governments expend through health departments almost 400 million dollars[1] annually for this important commodity. Public health is one of government's most important businesses, in that it not only promotes and maintains within a nation a high standard of living, but assures the nation a people who are vigorous, active, and physically prepared to meet national emergencies. The health enjoyed by our civilian population determines the physical fitness of our military forces. Without good health no nation may expect to survive either in peace or war.

That civilizations have fallen in the past because of poor health has been often and well demonstrated; for example, the devastating effects of malaria upon the golden era of Greece; the pernicious destruction wrought by malaria, typhoid fever, and smallpox which hastened the fall of the Roman Empire; or, finally, the hastened collapse of the Italian and African fronts through the crippling effects of disease in the last World War. That the eradication and suppression of such scourges is not alone the result of public health practice is common knowledge; but it is a fact that, through the application and extension of public health measures, nations have experienced tremendous improvement in the health of their civilian and military populations.

While past experiences have shown that efforts of health departments alone cannot prevent disabilities and illness, it is nevertheless true that adequately staffed health departments, working in coöperation with the medical profession, hospitals, and other community resources, can do much to maintain good health and keep to a minimum unnecessary illness, disability, and deaths.

THE ROLE OF PUBLIC RELATIONS

The attainment of the objectives of any program can be hastened by the employment of a continuing, good public relations program. Certainly, government's investment in the work of a health department deserves a critical analysis of the techniques which that health department employs in enabling people to attain and maintain optimal health through the prevention of unnecessary disability and sickness, the prolongation of life and the development of a sense of physical, mental, and social well-being.

In the attainment of these objectives, public relations can play a most important part, provided it is based on a well organized plan implemented with careful thoughtfulness by the entire staff of the department. In this respect, public relations may be considered as a science through which an organization may discharge its obligations in a manner which secures that public recognition and approval which is necessary to success.

A program of public relations involves many facets. It is more than health

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education. It covers, in fact, all of the relations which the department's staff has with the public from a telephone message or a letter, to the nurse's visit, the sanitary inspection, the investigation of a complaint, the examination of the school child, or the immunization of a baby—all of which are daily opportunities for health workers to win public understanding and support of the department's health program.

Recent years have brought vast changes in the social and economic structure of the nation; progress in medical science has caused attendant changes in health programs. New public health laws have brought new services and responsibilities to state and local health departments.[2] This rapid expansion, however, has not at all times occurred as a part of well considered or carefully integrated community health programs, nor has public understanding in all instances kept pace with this expansion. The health department must accept its portion of the responsibility for this failure. It is not only the health department's function, but a prerequisite to the success of its programs, that it evaluate, assimilate, and guide public opinion. By so doing any program which it initiates will not only reach, but become a part of the community. Each health department employee must realize that good public relations are involved in all aspects of his work.

PUBLIC RELATIONS METHODS

The use of public relations as a descriptive term becomes at times, vague and misleading. Its objectives may be divided into several categories: (1) the internal relations within a department; (2) the dissemination of information or health education; (3) community organization; (4) professional relations; and (5) governmental relations with other agencies of local, state, and federal government.

The tools of the science of public relations are many, and in general the health officer is oftentimes startled by the plethora of media available: radio, newspapers, movie films, lantern slides, television, letters, telephone calls, personal visits, exhibits, talks, personal appearances, and last but certainly not least, pamphlets and annual reports. These and many other tools are available to each of the staff for the formulation of public opinion leading to the creation of a demand for health services. An appreciation of the need for health services on the part of the public must be followed by their continued use of these services. Only in this way can the health department succeed in establishing the utilization of health services and, in the final analysis, receive the necessary support for increased health appropriations and improvement in salaries, equipment, and physical facilities so urgently required by many health departments.

INTERNAL RELATIONS

Public relations, like charity, begin in the home. A health department must, therefore, establish a well formulated internal relations program for the improvement and strengthening of personnel relationships. To maintain the acceptance and understanding of all members of the "inner circle" or departmental staff is a prerequisite to the department's successful liaison with outside groups. Serious consideration must be given to the employee's concept of the fairness, understanding, courtesy and kindness extended to him by the department, as well as to his reaction to the physical plant in which he works. Staff integration is all important. The busy atmosphere attendant upon good staff morale creates within the department an environment into which the outsider may enter with pleasure and confidence.

An awareness on the part of each employee of his department's objectives and services must be developed. While

the health officer is the key in all health department programs, the public relations program is not his field exclusively. The health officer may set the pace and policies and determine the plans for a public relations program, but to make it effective his entire staff from the chairman of the board to the humblest clerk must have a thorough knowledge and appreciation of the work, objectives, plans, policies and hopes of the department.

Since every contact of a health department employee is an opportunity for the development of good community relations, it is urgent that a proper in-service training program be developed for the instruction of personnel. Such a program should include a series of lectures, or talks, or informal seminars given by persons skilled in public relations, health education, and the humanities. A manual of procedures[3] should be developed which should include simple duties such as proper telephone deportment, correspondence standards, the management of visitors, home visits, and other everyday activities of each of the various professional and clerical staff members. The truly great opportunity to improve public relations lies in this effective utilization of the numerous and varied contacts of the staff. This can be far more effective and infinitely less expensive than any large-scale promotional or publicity campaign.

Through regular staff meetings the objectives, plans, policies and procedures of the health department should be carefully analyzed and evaluated. Such conferences offer to staff members an excellent opportunity to become acquainted with the programs and activities of fellow workers and thus bring about a deeper understanding and appreciation of the work carried on in other fields of activity—a reciprocal internal support which is the keystone of not only good public relations but also of a good public health program.

HEALTH INFORMATION

The dissemination of information, through departmental publications, constitutes an important segment of a health department's total public relations program. The use and abuse of a few of these publications may serve to illustrate the methods whereby success or failure may be realized.

All health officers receive the annual reports and pamphlets of other health departments. Few publications, unfortunately, are of interest. As these reports do not appeal to the health officer, it is reasonable to assume that they will not be read by the layman. In the final analysis, the function of an annual report is not to record but to inform. Bulky volumes of statistical analyses, prefaced by long narratives and printed in small type upon a poor grade of paper, quickly find a place in the "circular file." The annual report should be a report to the employer—the public. Printed on good quality paper, in color, well illustrated and in large print, it should present only the highlights, the objectives, and the recommendations for future action.[4] Above all, it should be interesting. It has been said that there are no dull subjects, but only dull writers.

Pamphlets too often are a waste of money and effort. Printed on newsprint, with very small type and without color or illustrations, their very appearance too often discourages the reader from investigating the content. A pamphlet should be short, its message simple, couched in basic English, and presented in a form which will be inviting. This again requires good illustrating, color, large print, brevity, and paper of good quality.

Newspaper releases, an important public relations medium, may be either an excellent method of creating or destroying good public opinion. If poor in character, a news release may receive a bad press, no press at all, or so antago-

nize the press that it creates a poor public opinion of the work and services offered by the health department. Above all, a newspaper release must have news value; it must be truthful and so written that technical language and statistical reports are transformed into a message which skillfully informs and at the same time maintains the interest of the general public. Although newspaper publicity may be considered vital to a health department in order that it keep its purposes and objectives in the public consciousness, its use should not be permitted to dominate the total public relations program. "Emphasis," it is said, "is too frequently placed on the tools of publicity rather than the skill with which they are utilized."

COMMUNITY ORGANIZATION

It is not enough for a department to have vague plans for the improvement of the health of the community; it is not enough, for example, to plan to improve immunization against diphtheria. Plans for new or expanded services must be definitive in time, in place, and in quantity of work to be accomplished; they must be definitive in the quality of services rendered. These objectives can be crystallized only after a careful study of community needs and of the acceptability of programs by the people served[5]; they must be based upon an objective analysis made in coöperation with other voluntary and official agencies.

The public demand and utilization of a health department's services determine the success of health programs. To be efficient, these services must be coördinated with those of other agencies. This means that the community relations program of a health department must reach the public, the healing arts professions, and other official and voluntary health and social agencies. The health officer in working with such groups must clearly define the department's objectives in order to foster the coöperative development of public support. People must not only know what is necessary for the maintenance of their health, but they must also be made aware of the services available to them through the health department and other community health agencies. They must know the what, where, how, and when of obtaining the services, and, finally, must be motivated to demand them.

"Submerged leadership" of the health officer within community organizations, such as health councils or health divisions of councils of social agencies, will successfully coördinate community health programs. That is, he provides the necessary guidance, advice, and support to interested citizens and agency workers in the development of health programs, and he allows the credit for implementing such measures to be enjoyed by them directly. "Credit," it has been said, "is like a bacterial colony, the more you divide it the more there is." After all, the health officer has attained his objective if civic leaders speak of "our" health program. A community health council can be a health department's watch dog. It may be its staunchest friend; and support the health officer's efforts in a way which will never subject the health officer to criticism that he may be seeking either more authority or a better salary.

Important objectives as, for example, increases in departmental budgets or the passage of legislation are far more readily realized when supported by an interested citizenry. However, the mere passage of a public health law does not bring about the success of any program. As Abraham Lincoln pointed out, it is "the acceptance on the part of the people or the public opinion behind a law which makes its enforcement and execution possible or impossible."

PROFESSIONAL RELATIONSHIPS

The practising physician is the most

important dispenser of preventive medical services, and it is urgent that cordial relationships be maintained between the medical profession and the health department.[6] Unfortunately, in some areas this condition does not exist. The health department may be entirely dominated by the medical society or the society may resent the intrusion of public health programs into their spheres of activity. If a health officer desires to have his program understood and endorsed by the professions, he must present it in a forthright manner. However, a cordial liaison with a professional group does not imply that the program need be directed by them but rather that their endorsement, assistance, and support is necessary to success. To improve friendly relations, members of the staff of the health department should be urged to maintain active membership in their professional societies. This includes attendance at professional meetings, participation in their programs and work on the various organizational and scientific committees. The health officer or public health nurse who avoids active membership in his or her professional society is failing in responsibility to the department as well as the profession and does not assist the department in obtaining the necessary support and understanding of its program.

Technical advisory committees should be organized and should meet periodically. Their purpose is to give advice and, conversely, to be informed of the objectives, plans, and policies of the department. The members of these committees through acquaintance and understanding of various health programs may actively support their objectives and interpret the work of the department to their daily contacts.

GOVERNMENTAL RELATIONS

The health department is only one member in the family of local government agencies. In all families antagonism may arise among members, and there are communities in which definite antagonism exists between the school department and health department. Similarly, there are instances in which the public health nurse, the school nurse, and the Visiting Nurse Association nurse do not integrate their activities, as a matter of fact will not pass one another on the same side of the street. These conditions are examples of poor public relations. In each community activity there should be organized regular inter-agency conferences. School health is the joint responsibility of the health and school departments. Public health nursing is the joint responsibility of all agencies employing public health nurses. After all, it is the community health program which is important and not the isolated Visiting Nurse Association, school committee, or health department program. Too often a health worker loses sight of the ultimate objectives because of jurisdictional disputes, and the efforts of all involved are ineffectual. Cordial relations must be maintained not only among the agencies of local government but with health, welfare, and social agencies at all levels of government.[7] Nowhere can we find a better record of excellent relationship than that which exists between the Public Health Service and state health departments. Similarly, there should be established between state and local departments an equally good inter-agency relationship through joint conferences of state and local health authorities. In communities, inter-agency coördination can be best achieved through community organizations which have accepted crystallized objectives for a health program.

CONCLUSION

Public health is big business. And, while never before have people been as aware of health as they now are, we have still fallen short of creating a proper demand for the attainment and

maintenance of optimal health. Therefore, the entire health department staff must engage in a continuous program of good, well planned public relations through an inservice personnel relations program for its employees and by the crystallization of objectives known to all and implemented by specific services and responsibilities. Many media of public relations are available, but they must be attractively presented to be effective. The health department, working with all of the professions of the healing arts as well as with community leaders and various groups, must develop public opinion to demand the attainment and maintenance of optimal health.

Finally, the public must have confidence in the ability and work of the health department. It must be made to feel the need of the department and the services which it offers.

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John J. Sippy Memorial Fund

Walter H. Brown, M.D., of Palo Alto, Calif., Chairman of the John J. Sippy Memorial Committee, Western Branch, American Public Health Association, recently announced the vote of the Western Branch at its recent Annual Meeting in Los Angeles to establish a John J. Sippy Memorial Fund. This was believed to be the most suitable and practical form of memorial for the late Dr. Sippy, who was Health Officer of San Joaquin County Health District for many years, and a Past President of the American Public Health Association. It is the plan of the Western Branch that the fund would be used to provide a lecture to be given at the Annual Meeting of the Western Branch, preferably by a member of the Western Branch. The lecturer and the subject will be chosen by a committee appointed annually by the President of the Western Branch on the basis of some outstanding contribution in the field of public health.

According to Dr. Brown's announcement, the response to the proposal has been both spontaneous and gratifying. The Executive Committee of the Western Branch has already made an initial contribution from the limited funds of the Branch, and the past and present members of the staff of the San Joaquin Local Health District have made a substantial contribution of the funds remaining from those collected by them for a memorial plaque at the office of the District.

Dr. Brown has announced that members of the Western Branch and others who wish to contribute to this fund may do so by sending their gifts in care of Dr. Brown at 628 Guinda Street, Palo Alto, Calif.

Poliomyelitis in San Francisco, 1948

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IN consonance with the nation and the state, San Francisco last year experienced, from the standpoint of numbers, the largest epidemic of poliomyelitis in its history. Even though our statisticians can show that, calculated upon population, the morbidity rate for 1948 was less than that experienced in 1930, nevertheless 288 cases of local origin were reported during the calendar year. This is a record and parallels the nation's reported 27,658 cases, and the record total for the State of California of 5,804 cases.

This epidemic spread across the nation from east to west and particularly throughout the South. It entered California through the southern area, and gradually crept northward until the entire state was involved. Even though it developed into the largest outbreak recorded, there was no evidence of panic among the population. Never have the patients received such excellent educational advantages, splendid medical care, and adequate hospital facilities. Though facilities were taxed, adequate nursing care was provided, and physicians always seemed to be available. The poliomyelitis patients treated in San Francisco have never received better nor more complete medical care in the history of modern medicine.

In the periods of increased incidence of poliomyelitis, occurring in San Francisco in 1934, 1943, and 1945, the epidemic period began and ended within the calendar year. In 1930 and in 1948 the incidence exhibited a downward trend from the peak in October of each year, but the epidemic was not terminated until early in the following year. For purposes of this review of the recent epidemic, reported cases and deaths for a 12 month period from March 1, 1948, to March 1, 1949, have been selected to cover the full period of the epidemic, and, where necessary, information for the same months is offered for 1930.

Although the 314 cases reported in the 12 month period (1948–1949) exceeded by 29 per cent those reported in a similar period (1930–1931), the morbidity rate was lower; 36 per 100,000 for the recent period, 38 per 100,000 in 1930–1931. In California for the same period, 6,042 cases were reported with a case rate of 60 per 100,000.

In the local series of cases, 27 deaths occurred—8.6 per cent fatality for the group. Since all deaths occurring in San Francisco are chargeable to the records, the death rate is computed on the total of both local and non-local deaths. This total of 53 deaths produces a mortality rate of 6.0 per 100,000 population.

Distribution by sex shows 173 cases, or 55 per cent male, 141 or 45 per cent female. Of the 27 local deaths—13 or 48 per cent male, 14 or 52 per cent female. The case fatality rate for males was 7½ per cent—for females, 10 per cent.

Seventy-two per cent of the cases and 40 per cent of the deaths occurred in groups under 15 years of age. The epidemic apparently was felt most keenly in the primary school group, 5–9 years, with a total of 108 cases or 34 per cent of the total. It may be that this group

was under closer supervision at home and at school, that symptoms were recognized and treatment begun earlier, or that these children responded more readily to treatment. Whatever the underlying cause, the fact remains that only 3 per cent of these 108 cases resulted fatally—the lowest fatality in any age group. Three age classifications show a very high rate of mortality. In the high school group (15–19) were found but 5 per cent of the cases with an 18 per cent fatality. In the 30–34 years group were found 4 per cent of the cases and a 21 per cent fatality, and in the group of adults 35 years and over, there were 3 per cent of the cases and a fatality of 33 per cent. Actual ages for this last group were 35(2), 36(3), 38, 39(2) and 40, deaths occurring at ages 38, 39 and 40. There were no deaths in the under 1 year group, and only 4 per cent of the cases were found in that period.

In spite of recent scientific suggestions, involving sewage, milk, water, and insect vectors, the person must still be considered of prime importance in the transmission of this disease. From the very beginning rigid quarantine of close intimate contacts was enforced. During this outbreak, 484 individuals were quarantined, as members of 251 families in which a case of poliomyelitis had occurred. In addition, 114 non-family contacts were placed under quarantine. Thirty-four cases developed from known contacts. In twenty-three instances two members of the same household contracted the disease and in each of four of these homes, one of the patients died.

To Children's Hospital and the Isolation Division of the San Francisco Hospital fell the responsibility of caring for hospitalized cases, with 49 per cent of the cases at Children's and 40 per cent at Isolation. Seven per cent of the cases were either coroner's cases, dying before hospital care was available or were cases receiving home treatment. Twelve patients were cared for in other hospitals; Letterman taking 5, Veteran's Hospital 4, Alcatraz 1, and 2 going across the Bay—one to Highland and one to Oak Knoll. The case sent to Oak Knoll died there but the death is not included in any mention of fatality since it was not chargeable to San Francisco. Thirty per cent of the deaths occurred at Children's Hospital, and 39 per cent at Isolation.

The seasonal trend for the epidemic is established in the report of cases by date of onset. From July 3 to February 5 there was uninterrupted weekly reporting. The rise in incidence was gradual, reaching a peak in the week ending October 16, with a report of 23 cases. No significant change in this high level of incidence was noted until a month or six weeks later when a definite leveling off developed. As early as the middle of December, with reported incidence slowly but steadily declining, it was almost certain that the epidemic period would extend into the early part of 1949. Events proved the assumption true, for by the end of February, 27 new cases had been reported; 11 of them with onset dates in December of 1948.

The accompanying chart has been prepared on the 12 months' basis (1948–1949). It indicates the date of reporting by physicians, and the onset date of the disease as determined by the Health Department epidemiologists. The usual lag between the reporting date and the onset date is evident but not too exaggerated.

It is not possible to establish a rate of incidence in any one locality of the city because no population estimates for Census Areas are available. However, reports of cases through the epidemic period came from almost every district in the city, with not too great a concentration in any one area. The high-

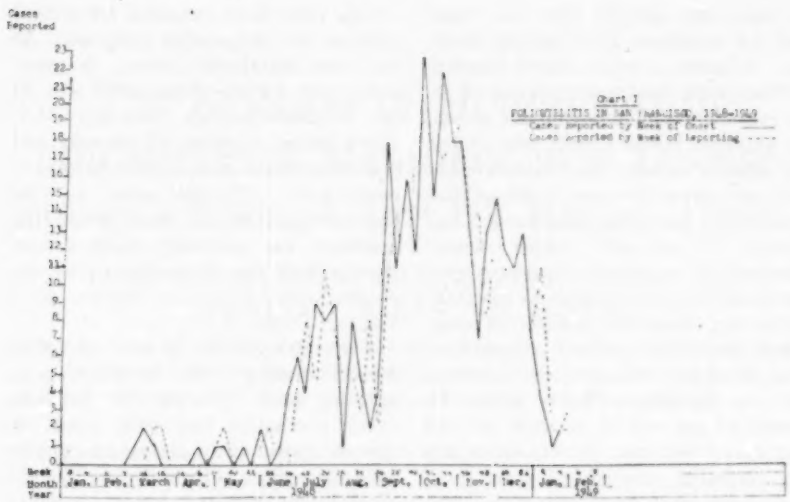

Chart 1

est percentage of total cases reported was found in District L—22 per cent. This lies in the southeastern part of the city and includes several re-development projects and a varied racial distribution. Two districts, M and N, with 15 and 18 per cent of the cases respectively, constitute a large residential area; much of it lies in what is known as the Mission District, recognized locally as having an equable climate. District P, which runs from Lake Merced to Golden Gate Park and is one of the newer residential areas of the city, reported 9 per cent of the cases.

Although racial groups are concentrated very largely in definite localities, it is rather significant that only 12 cases were found in the non-white portion of the population; 4 among the Chinese, 6 in the Negro population, 1 Japanese, and 1 Filipino. This Filipino case resulted fatally and 1 death also occurred in the Chinese group of cases.

Attending physicians, making their original reports of poliomyelitis cases, classified the case as being of a bulbar type, a paralytic type or a non-paralytic type. Of the 314 local cases studied 42 or 13 per cent were of the bulbar type, 161 or 51 per cent fell into the paralytic group, and the remaining 111 or 35 per cent were non-paralytic. The degree of paralysis was not easily recorded but of the 161 cases classified as paralytic, 108 or about 67 per cent of them showed a definite paralysis while the remaining 33 per cent showed only muscle weakness or spasm. A follow-up of all cases, three to six months after onset, will doubtless reduce greatly the paralytic proportion.

As early as May non-local cases were being reported in excess of a normal expectancy, with evidence of the earlier beginning of the epidemic in other parts of the state. A total of 251 non-local cases were brought into San Francisco for treatment during the 1948–1949 period. Although a few of these cases were entered for care at Isolation Hospital and at Letterman, 82 per cent of them were taken to Children's for hospitalization. Nearly one-half of the deaths from poliomyelitis chargeable to San Francisco, occurred in this non-local group of cases.

About 4 per cent of the total cases in

the state were brought into San Francisco for treatment from outside counties. Adjacent counties, where hospital facilities were inadequate appear to be the greatest contributors to this group. For example, Marin County sent 86 per cent of its cases here, San Mateo County —21 per cent of its cases, Contra Costa County—23 per cent, and Santa Cruz County—56 per cent. Other smaller communities at greater distances from San Francisco and in which no hospitalization was obtainable, transferred many if not all of their patients to local hospital services. Among such communities was Stanislaus County which delivered 61 per cent of its cases to local care here. So many factors enter into the statistical analysis of these nonlocal cases that they cannot be considered representative of this locality, and it seems advisable to leave a detailed study to the community of origin or to the State Department of Health, for a complete analysis.

Case rates were computed for several counties for comparative purposes. As has been mentioned before, the morbidity rate for the entire state was 60 per 100,000—for San Francisco, 35.9. The adjacent counties of Alameda and San Mateo show rates of 27.5 and 53.9, respectively. Certain areas in the southern part of the state, where the epidemic was definitely more severe, show a high rate of incidence; for example, Kern—133.4, Los Angeles—83.4, and San Diego—62.0.

Even though the answer to poliomyelitis is not yet clear, we feel progress is being made. During this outbreak every precaution has been taken to prevent spread of the disease and to provide immediate diagnosis, early hospitalization and treatment, and to initiate a thorough and continued program aimed at rehabilitation. At no point in the program has the economic factor been permitted to interfere with the total care of the patient.

The Relation of Housing to the Incidence of Meningococcic Disease in an Outbreak in Oak Ridge, Tenn.*

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THE epidemiology of meningococcic disease is by no means completely understood. The following factors have been stated to predispose to infection: overcrowding, poor ventilation, fatigue, chilling, and lack of latent immunization. In military forces, various prophylactic inoculations and "lack of hardening" among new recruits are also said to contribute to the disease. In many places, the Negro rate has been appreciably higher than the white rate, and an excess of cases among males has been observed. In Oak Ridge, an unusual opportunity was presented to study housing in relation to this disease because the community consisted exclusively of a small number of dwelling types as a result of mass construction. The analysis which follows is concerned with an outbreak during the war period.

THE COMMUNITY

This federal reservation, known during the war period as "Clinton Engineer Works" and now designated "Oak Ridge Area" by the U. S. Atomic Energy Commission occupies a 92 square mile area in portions of Anderson and Roane Counties in Eastern Tennessee. From July, 1943, when workers began to take up residence in this formerly rural area, to January 1, 1944, the population had grown to 19,128. It continued to grow rapidly until it reached a peak of 74,930 on June 1, 1945. Thereafter the population declined, falling to 42,465 on December 31, 1946. These statistics include the military population which reached a peak of approximately 2,000 in the summer of 1945. The residential areas comprised two main parts, the larger in Anderson County, and the other about twelve miles removed in Roane County.

Houses, apartments, and dormitories which attained minimum standards of satisfactory housing were built to house approximately 46,000 persons. However, the rapid increase of workers required for construction and operation of the atomic plants necessitated in addition the construction of temporary dwellings for about 29,000 persons. Included among the latter group was the entire Negro population. These dwellings consisted of hutments, trailers, and barracks.‡

The hutments consisted of 16 ft.

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† Formerly, Health Officer and Statistician respectively, Oak Ridge Department of Health, Oak Ridge, Tenn.

‡ All substandard housing has since been removed by the Atomic Energy Commission.

square single room buildings in which were placed cots for four or five men or women. Shutters on the sides were used in place of windows. Lavatory and toilet facilities were provided in central bathhouses for groups of hutments, sometimes as many as 25 in a group. The trailers were set up primarily for families although some were occupied by persons of one sex. In general, trailer residents also were dependent on central bathhouses for toilet and lavatory facilities. Barracks, with sleeping cots laid side by side were erected for most of the enlisted men and for some civilians. These barracks in a sense were large-sized hutments. At the peak of operations, there were about 5,000 trailers and 16,000 hutment and barrack spaces.

The dwellings described above have been designated as "slum" in this report. This term is used in the sense of the definition set forth by the American Public Health Association Committee on the Hygiene of Housing, as an area in which 75 per cent or more of the dwellings show two or more basic deficiencies each. Such basic deficiencies were: (a) toilet outside structure and shared with other dwelling units, (b) bath outside structure and shared with other dwelling units, (c) water supply outside dwelling unit, and (d) room crowding: over 1.5 persons per room.[1-3]

The dwellings classified as "standard" in this report consisted of three general types: "semi-permanent" houses and apartments, "demountable" or "prefabricated" houses and apartments, and dormitories. The semi-permanent types were structures built on cement foundations with brick chimneys and central heating, but with walls constructed of cemesto boards. The prefabricated types were of more temporary construction, requiring less on-the-spot labor, but they satisfied the space and sanitary requirements of the A.P.H.A. standards. The dormitories were two-story wood and brick buildings made up almost entirely of single or double rooms. Each of them housed approximately 150 men or women, except during periods of temporary shortage when doubling up became necessary.

Rigid control of the flow of migrants into Oak Ridge brought as a by-product fairly exact statistics of the population in each housing area. Statistics by color were available as a by-product of racial segregation. Much personal information was available on records of employees and residents, but scattered in several offices. Unfortunately, statistics on such demographic characteristics as sex, age distribution, length of residence in Oak Ridge, and permanent residence were not compiled from these personal records. After it replaced the Army, the U. S. Atomic Energy Commission made estimates of a few population characteristics by sampling these records.[4] Among these characteristics were the age-sex distribution in January, 1948, and the median length of residence in several dwelling types from 1944 through 1947. For this study, the sample age distribution was adjusted with age statistics of school children available from earlier years. As will be indicated later, the unavailability of certain important demographic statistics was one factor leading to limited success in the analysis.

ANALYSIS OF THE EPIDEMIC

Twenty-six cases occurred in 1944 giving the high rate of 55 per 100,000 population; 27 cases occurred in 1945 with a rate of 40.* Five additional cases occurred in 1946, making a total of 58, all of whom were civilians.

The mean annual rates for 1944–1946 by dwelling type are compared in

* All case rates in this paper are "per 100,000 population." This phrase is not repeated in the text for brevity. All rates and their standard deviations, both for Oak Ridge as a whole and the several dwelling areas, were computed in terms of person-years of experience. The person-years statistics were computed from semi-monthly population statistics.

TABLE 1

Meningococcic Disease: Dwelling Types and Areas by Populations, Cases, Rates and Standard Deviations
Oak Ridge, 1944–1946

Dwelling Type and Area	*Mean Annual Population*	*Number of Cases 1944–46*	*Mean Annual Rate For 100,000 Population*	*Standard Deviation of Rate (σ_p)*
White standard				
Houses and apartments	25,292	10	13	4
Dormitories	8,092	4	16	8
Subtotal—white standard	33,384	14	14	4
White slum				
Roane County	5,565	9	51	17
Anderson County	9,808	21	71	16
Subtotal—white slum	15,673	30	64	12
Colored [a]				
Roane County	1,081	10	308	97
Anderson County	1,409	3	71	41
Subtotal—colored	2,489	13	174	48
All White, standard and slum	50,429 [b]	45 [c]	30	4
All slum, white and colored	18,163	43	79	12
Total	52,918 [b]	58 [c]	37	5

[a] All colored persons lived in slum dwellings.
[b] Includes full military population.
[c] Includes one case with unknown dwelling.

Table 1. The rate for persons living in standard dwellings, 14, differs significantly from the slum rate, 79, the probability of such a difference arising by chance being less than 0.001. Likewise, the difference between the white standard rate, 14, and the white slum rate, 64, has less than 0.001 probability of chance occurrence. The white slum rate not only differs significantly from the white standard, but also from the colored slum rate, 174, the probability of chance occurrence of the difference 174–64 being 0.002. Considering Roane County alone, the colored rate, 308, is significantly higher than the white rate, 51, the probability of chance occurrence of the difference being less than 0.001. However, the Anderson County Negro rate cannot be similarly compared due to smallness of numbers.

In other places, it has been observed that the Negro rate is appreciably greater than the white rate.[5–7] But only a few authors consider the influence of poor housing or other factors which might affect these attack rates. For example, Dauer found in his analysis of meningococcic meningitis in the District of Columbia during the years 1935–1936 that the rate for whites living in substandard housing was about as high as the rate among Negroes living under similar conditions.[8] However, at Oak Ridge, where housing types were more distinctly defined, the Negro attack rate was significantly higher than the rate for whites living in practically identical housing. Also, at the time of his study, Dauer did not have the benefit of the quantitative appraisal method for measuring the quality of housing subsequently developed by the A.P.H.A. Committee on the Hygiene of Housing.[2] It is probable that his use of groups of census tracts to delimit fairly large areas of white and Negro substandard housing resulted in a certain amount of variation in dwelling types within these areas.

These statistics by dwelling type and area indicate the influence of environmental conditions in Oak Ridge upon the rate of meningococcic disease. It is desirable, however, to distinguish among several possible environmental factors: overcrowding, chilling associated with

use of central bathhouses in inclement weather, and fatigue or chilling associated with work. Reports in the literature differ on the relative importance of overcrowding in this disease.[6, 9-14] It is possible that one of the causes of such disagreement stems from differing definitions and uses of the word "overcrowding." For example, one of the most precise studies supporting the importance of overcrowding was by Glover in a British Army camp.[11] But overcrowding as extreme as that defined by Glover did not, in general, exist among occupants of slums in Oak Ridge. Yet, as indicated earlier in this report, overcrowding was one of the criteria differentiating slum from standard dwellings, in accordance with definitions of the A.P.H.A. Committee on the Hygiene of Housing.

In the usual community, standard and slum housing are closely associated with the economic status of the occupants. Such an association did not exist appreciably in wartime Oak Ridge. Employees of construction companies were generally assigned slum housing, including personnel with high incomes or professional status, whereas operating company employees received preference for standard housing. Thus economic status was not a significant factor in accounting for the difference in rates between standard and slum housing. But work conditions, such as greater exposure to the elements plus possible fatigue resulting from long work hours in the rush of construction, might have contributed to the higher rate among slum dwellers.

Since men are more subject than women to exposure at work and to other work conditions, the magnitude of this factor might be estimated through the sex ratio. Certain studies of meningitis indicate that the sex ratio in the childhood years is close to unity, but that male cases are several times more numerous than female cases above age 15 or 20.[8, 15] This excess for males in the working years may be attributed to the work conditions of men outside the home. A breakdown of the Oak Ridge data by dwelling type, color, age, and sex is given in Table 2. It should be noted that male cases far outnumber female cases in the adult years in all three dwelling groups, white standard, white slum, and colored slum, but in the childhood years, the differences in numbers between the sexes are not so extreme. However, two restrictions apply in the interpretation of these data. First, the male population at risk in the slum dwellings probably exceeded the female population. Second, the differences in this fine breakdown are not statistically significant, possibly due to smallness of numbers.

TABLE 2

Meningococcic Disease: Cases by Age Groups, Sex, and Dwelling Types Oak Ridge, 1944–1946

White Standard

Age	*Male*	*Female*	*Male/Female Ratio*
0–19	3	5	0.6
20 and over	4	2	2.0
All ages	7	7	1.0

White Slum

Age	*Male*	*Female*	*Male/Female Ratio*
0–19	12	4	3.0
20 and over	13	1	13.0
All ages	25	5	5.0

Colored (Slum)

Age	*Male*	*Female*	*Male/Female Ratio*
0–19	0	1	0
20 and over	10	2	5.0
All ages	10	3	3.3

Total

Age	*Male*	*Female*	*Male/Female Ratio*
0–19	15	10	1.5
20 and over	28a	5	5.6
All ages	43a	15	2.9

[a] Includes one Oak Ridge case with dwelling type unknown.

Since incidence by age is important in the evaluation of the several factors just discussed, it is important to consider the age distribution of the cases. The mean annual rates for three broad age groups

TABLE 3

Meningococcic Disease: Cases by Age Groups, Dwelling Types and Rates Oak Ridge, 1944–1946

Age in Years	Dwelling Type: White, Standard	Dwelling Type: White, Slum	Dwelling Type: Colored (Slum)	Total	Mean Annual Rate Per 100,000 Population
0–14	6	15	0	21	72
15–29	4	6	7	18 [a]	33
30 and over	4	9	6	19	25
Total	14	30	13	58 [a]	37

[a] Includes one Oak Ridge case with dwelling type unknown.

TABLE 4

Meningococcic Disease: Populations of Permanent Residence by Cases, Median Lengths of Residence Prior to Onset, and Percentages of Oak Ridge Cases and of United States Population

Population of Permanent Residence	Oak Ridge Cases 1944–1946: Number	Median Length of Residence Prior to onset (in months)	Percentage	Percentage in United States Population 1940
Less than 2,500	25	4	43.9	43.5
2,500–9,999	9	5	15.8	8.9
10,000 and over	23	5	40.3	47.6
Total	57 [a]	4	100.0	100.0

[a] Does not include one infant born in Oak Ridge.

are given in Table 3. They varied from 72 in the below 15 age group to 25 in the over 30 age group, with a rate of 37 for all ages combined. When the combined rate was adjusted according to the 1940 United States population, it increased slightly from 37 to 39. Also as indicated in Table 3, the proportion of cases below age 15 to cases 15 and over was practically the same in white standard and in white slum dwellings.* Thus the variation by age was not markedly different from that reported in other studies on civilian populations nor anomalous in other respects. [7, 13, 15–18]

A related question is the development of immunity to meningococcic disease as a result of prior exposure to the organism. Certain studies have suggested greater susceptibility of persons migrating from rural to urban conditions.[5, 19] These observations could be, at least in part, manifestations of the effects of housing rather than susceptibility, since rural persons migrating to cities for the first time might, in general, have substandard housing. In addition, some authors have pointed out that in military life, new recruits are particularly susceptible to the disease.[20, 21] It seemed desirable to study separately the influence of each of the factors, housing, rural origin, and "newness" in the community.

Information regarding population of permanent residence was collected for the cases (Table 4). If similar information as to size of place of origin had been available for the population at risk, attack rates could have been calculated by place of origin. Since this informa-

* There were no cases among colored children. Prior to the middle of 1946, there were practically no colored children in Oak Ridge due to the lack of even the most meager colored family housing facilities. Considering the high rate in the colored adult population and among white children, it is a reasonable presumption that had colored children been present in Oak Ridge in appreciable numbers, the rate among them would have been very high.

TABLE 5

Meningococcic Disease: Median Length of Residence of Cases (Prior to Onset) and Population in Several Dwelling Types, Oak Ridge, 1944–1946

	Median Length of Residence in Dwelling Type (in months)		
	White		
Group	Standard	Slum	Colored (Slum)
Cases prior to onset	8	4	1
Population	17	5	—[a]
Ratio: Case/Population	8/17	4/5	—[a]

[a] Estimate unavailable.

tion was not available, it was of interest to compare the percentage distribution of the cases, by population groups, with the percentage distribution of the U. S. population by the same groups. Very close similarity was found. While certainly not conclusive evidence, this would perhaps indicate no greater likelihood of illness in one group than in another. Further analysis was done by comparing the intervals between arrival in Oak Ridge, representing arrival into urban conditions, and date of onset. If persons of rural origin were more susceptible, one might expect illness in this group to be relatively more concentrated in the early months after arrival. The fact that no significant difference was found in median lengths of residence prior to onset would also seem to indicate no difference in susceptibility.

It was thought possible that evidence of greater susceptibility might be found in persons of rural origin if this type of analysis were made separately for the various dwelling types. Accordingly, length of residence was studied in relation to place of permanent residence with the type of dwelling under statistical control. Again no significant relationship was found, i.e., differences in susceptibility could not be demonstrated, possibly due to small numbers.

A further index of comparison is presented in Table 5. The ratio was computed of the median length of residence prior to onset to the corresponding median for the population in each dwelling type. If in the slum dwellings, there were a greater probability of illness in the early months as contrasted to later months, this ratio would be lower in the slums than in the standard dwellings. However, the computed ratios, 4/5 in slums and 8/17 in the standard dwellings, do not indicate such a relationship.

SUMMARY

The present study was undertaken to determine factors associated with the incidence of meningococcic disease in Oak Ridge. In the course of the study, it was necessary to delimit the effect of factors such as housing, age, sex, race, and latent immunization. Mass construction of housing according to specific types facilitated classification of housing in accordance with definitions of the A.P.H.A. Committee on the Hygiene of Housing. Wide differences in rates among several housing groups were demonstrated.

The rate in the white slum group was significantly higher than the rate in the white standard group. In one slum area, the rate in the colored dwelling group was shown to be significantly higher than the rate in the white group having comparable housing. The effect of environmental conditions was considered, and an attempt made by statistical analysis to determine the influence of such conditions. These conditions, including both housing and work, were studied in relation to age, race, and the sex ratio. The problem of susceptibility and im-

munity was studied from two perspectives: (1) rural versus urban origin, and (2) interval of time preceding onset of illness after arrival into the urban conditions of Oak Ridge. Each of these perpectives was considered in relation to dwelling type.

Limited success was obtained in the analysis due to the unavailability of certain important population statistics. Also, it may be that in the precise analysis which was undertaken, additional significant relationships might have been found had larger numbers of cases been available. Since mass shifts of the American population may be expected to continue in the future, environmental conditions such as existed in Oak Ridge may be duplicated elsewhere. Thus, the statistical methods of approach used in this paper are offered as potential means for future study of this disease.

APPENDIX

The statistical test used to determine the significance of the difference between two rates p_1 and p_2 was

$$t = \frac{p_1 - p_2}{\sqrt{pq\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

referred to a normal probability table, where p is the probability of the hypothetical universe, $q = 1 - p$, and n_1 and n_2 are the populations in the two compared groups. With q assumed equal to unity, the denominator of this fraction becomes

$$\sqrt{\frac{m_1 + m_2}{n_1\ n_2}}$$

where m_1 and m_2 are the numbers of cases in the two groups.

In parts of the analysis where interrelationships between classes of cases could be represented by fourfold tables, R. A. Fisher's exact treatment of 2 x 2 tables was used.[22]

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THE SEVENTY-SEVENTH ANNUAL MEETING

FEW who attended the sessions at New York October 24–28 will challenge the conclusion that this Annual Meeting was "tops" both in quantity and quality. The registration of over 5,300 exceeded by about 1,000 any previous registration in the history of the Association. There were 59 different sectional meetings, 39 of them sponsored by a single section, 6 by two sections, 5 by three sections and 9 by from 4 to 7 sections respectively. In addition there were held during the week 24 meetings of various committees of the Association. Those who have enjoyed the privilege of attending meetings of our three major Standing Committees cannot have escaped a thrill of pride in the service rendered by members of this Association on our committees throughout the year. Research and Standards has some 200 working members on its various subcommittees; Administrative Practice has 150; and Professional Education an almost equally large number.

The new method of electing members at large of the Governing Council by letter ballot, instead of at the Annual Meeting itself, proved highly satisfactory. A total of 1,370 valid ballots were cast, representing more than 70 per cent of the total fellowship roll, three times the number of ballots cast at the last Annual Meeting. Dr. Lowell J. Reed, as President-Elect, succeeds Dr. Wilinsky as President. The Governing Council named Dr. W. P. Shepard as President-Elect, a choice which was hailed with unusual enthusiasm. It is an honor, well deserved for many services to the general cause of public health and, particularly, by Dr. Shepard's inspiring leadership of the Committee on Professional Education. Dr. Herman E. Hilleboe was chosen as Treasurer, succeeding Dr. Louis I. Dublin who has served the Association in this capacity with remarkable devotion for a quarter of a century. The Annual Banquet was a warm and delightful "family affair," marked by the President's address, the presentation of certificates to a distinguished group of members who have completed forty years of association with us, and the award of the Sedgwick Memorial Medal to Dr. Henry F. Vaughan, whose name adds new luster to the roll of his predecessors who have received this honor for "distinguished service in public health."

Perhaps the most striking event of the meeting was the remarkable development of the new Section on Medical Care, created a year ago. This Section held eight sessions, five of them conjointly with other Sections. Its meetings were jammed to the doors. Specially notable sessions were those devoted to regionalization of medical services (illustrated particularly in Michigan and in the program of the Bingham Associates); to rehabilitation; and to a discussion of the British National Health Service (led by four distinguished English guests).

Three of our Sections celebrated birthdays this year. The Laboratory Section held a Fiftieth Anniversary dinner, at which a group of elder statesmen (with membership dating back to 1902) recalled the bacteriology and the bacteriologists of earlier days. The Industrial Hygiene Section (thirty-five years of age) presented a symposium under the title "Industrial Hygiene Marches On," besides Chairman W. G. Fredrick's address on the significance of the anniversary. The Epidemiology Section celebrated its Twentieth year in an even more impressive manner through a carefully prepared program on "The History of American Epidemiology"; and, particularly by a luncheon in honor of its most eminent Fellow, Dr. Haven Emerson, on the occasion of his seventy-fifth birthday. Dr. Emerson was, on the whole, distinctly "Queen of the May" this year, for in addition to this luncheon, he received two other signal honors, a Lasker Special Award at the Tuesday General Session, and the publication of a volume reprinting a collection of some of his more important contributions to the philosophy and the practice of public health.

It is impossible, here, even to mention more than a tiny fraction of the valuable papers presented at the 59 sectional meetings. As many as space permits will be presented to our readers in subsequent issues of this JOURNAL. Problems of air sanitation and the remarkable progress now under way in the eradication (not merely the *control*) of insect-borne diseases was reviewed by the engineers; the Academy of Pediatrics study of Child Health, the problems of prematurity and antepartum care, by the specialists in maternal and child health; those of food and nutrition during pregnancy, and of the use of isotopes in nutrition research, by the experts in food and nutrition; those of research in dental caries and of the effects of fluorination by the dentists.

Finally, a word should be said about the session on Integrating Mental Hygiene Concepts into Public Health Programs, sponsored jointly by the Health Officers, Public Health Education, and School Health Sections (as well as by the American School Health Association), in coöperation with the National Committee for Mental Hygiene. The audience at this session was probably the largest ever brought together in an A.P.H.A. sectional meeting. The speakers on this occasion fully convinced their hearers that the days of merely talking about mental hygiene are past. This thrilling new area of public health has now developed a group of leaders who not only have at their disposal a solid basis of sound knowledge of the human mind, and a demonstrated body of techniques; but also the ability to give us that knowledge in a language we can understand and to place those techniques actually at the disposal of the health officer in his local field of service.

CLOSE OF THE EMIC PROGRAM

THE termination of the EMIC program on June 30, 1949, closed a gratifying and encouraging chapter in the history of medical care in the United States.

As our readers are aware, EMIC was a wartime program operated by the state health departments to give medical, nursing, and hospital, maternity and infant care to wives and babies of enlisted men in the four lowest pay grades, about three-fourths of the armed forces. Funds were supplied by Congress through the Children's Bureau within the framework of the Social Security Act. The fact may not be as clearly realized that, at its height, this program covered one out of seven of all births taking place in the United States. Its purpose was to give a serviceman assurance that his pregnant wife and his coming child would have good medical care, and that the cost would be paid for from general tax funds. Men returning from World War II did not face unpaid maternity bills as did those of World War I.

It is probable that the most important long-range influence of the program was its emphasis on quality of care, which not only affected the mothers and infants who received direct services, but raised the local level of maternal and child care in entire areas, where that level had before been low. Minimum standards were established for hospital, maternity, and new-born services for the first time, in many parts of the country. The EMIC medical advisory committees appointed by state and local health departments were a potent force in maintaining a high quality of medical care under the program by recommending standards of prenatal care, establishing lists of consultants competent in various specialties, and by urging the general practitioners to call the consultants who were made available under the program. Many mothers whose husbands were not in service learned from EMIC patients what to expect in the way of good medical care throughout pregnancy, at delivery, and after the baby's birth. They learned for the first time what good health supervision and medical care for an infant really is. More widespread appreciation of the value of hospital care as a result of the EMIC program was partly responsible for the fact that in 1947 the proportion of births occurring in hospitals reached a new high of 84.8 per cent, as compared with 72.1 per cent in 1943, an increase of almost one-fifth. This occurred in spite of the great post-war rise in the birth rate and the shortage of new hospital facilities.

All physicians were paid for their services, and though in some parts of the country the rates of payment were less than is customary in private practice, in other areas the rates were better than the pre-war average. Hospitals were paid on a cost basis, and they—like the doctors—had no "bad bills."

Since the principle was established under EMIC that payment by the state agency must constitute full payment to the hospitals and physicians, it was essential that rates of payment to physicians and hospitals be made equitable.

The per diem cost formula for payment to hospitals was accepted, in general, to a surprising degree. Incidentally, the fact that there was no additional payment for surgery (such as caesarean section) included in the program avoided any possible incentive to unnecessary surgical interference.

One of the most amazing features of the EMIC was the facility with which every state health department established the machinery for administering this medical care program, involving practically all physicians and hospitals in the state. Many of the patients were moving from state to state, and it was not found difficult to arrange for continuing care, since the programs, almost identical in scope, were in operation in all states. Although there were many complaints at one time about too much federal insistence on reasonable uniformity of the state programs, most of the states welcomed the fact that they did not have to negotiate locally without full support of the CB, with respect to the basic principles involved. The Chil-

dren's Bureau, with the best medical advice it could secure, had, of course, to bear the ultimate responsibility of seeing that care was made available under conditions which were as equitable as possible to all concerned.

The average cost during 1943–1948 of EMIC maternity cases completed was $92.49 for medical and hospital care, and for cases of infant care completed it was $63.89. The $127,000,000 paid to state health departments bought for almost 1¼ million mothers and their infants the health supervision and medical care they needed. State health departments learned that the cost of administration in such a medical care program was very low compared to the costs for service. Although accurate totals for state and local expenditures for administration have not been compiled, the states usually estimated them as considerably less than 5 per cent. The Children's Bureau administered its responsibilities for the program with its small pre-war staff, and it had no new funds except for three auditors rather late in the program. There is an immense amount of valuable factual information available to the state health departments which have the time and the money to finance the analysis of their medical and administrative records under the EMIC program. A few such studies have already been initiated. Public health workers will find a mine of information about the administration of EMIC in the report of a study made by the School of Public Health, University of Michigan, while the program was in full operation. Dr. Nathan Sinai directed the study and reported his findings in "EMIC—A Study of Administrative Experience." One of his conclusions summarizes well the administrative lesson to be learned from this wartime medical care program. "EMIC serves as a striking demonstration of joint effort and of administrative resiliency. It would be hard to find another wartime program that grew to such comparatively huge proportions and still remained within the framework of an existing national, state, and local peacetime administration. The accomplishments in meeting the problems, disregarding the antagonisms, conflicts, and fears, are a monument to the combined contributions of medicine, public health, and the hospitals. Maternity and infant care were the goals; maternity and infant care are the achievements."

THE KEY TO SLUM ELIMINATION

THE Federal Housing Act of 1949 is the outstanding contribution of the First Session of the Eighty-first Congress in the field of domestic legislation.[1] That contribution is a major one, which will provide hundreds of thousands of American citizens with those living conditions which are essentially basic for physical and emotional health.

The new housing to be provided under this Act during the next six years will be, in most cases, based on slum clearance and will require extensive and detailed knowledge of present substandard housing conditions, in order that maximum results may be attained. It is, therefore, fortunate that our Association Committee on the Hygiene of Housing has completed the third of its series of reports on an *Appraisal Method for Measuring the Quality of Housing*.[2] The Method of Appraisal developed in these reports gives us a reasonably complete and accurate quantitative rating the character of each home and of a neighborhood as a whole. It provides the soundest basis for specific legal control of an individual structure; and the necessary background for wise community planning.

This procedure has been endorsed officially by the U. S. Public Health Service which is prepared not only to advise health officers, housing and redevelopment

authorities, and planning boards as to its application, but also to provide specific training for the men who are to direct a survey, either at Atlanta or in any locality where sufficient demand exists. The actual survey may be carried out by members of the regular inspection staff of any competent local health department, as has been demonstrated in over thirty cities, from Portland, Me., to Los Angeles, Calif. It is more and more widely recognized as a necessary continuing function of the local department of health.

The Committee on the Hygiene of Housing expects to continue its study of the Appraisal Procedure with a view to simplifying it still further. There are, however, no easy short cuts in the measurement of the factors involved. The data in the 1940 Census as to "structures in need of major repairs" have proved wholly unreliable; and the 1950 Census item, which we understand will record "dilapidated" can only add further to confusion. It is quite impossible to obtain any reliable data on this point from untrained census enumerators. Nor have the costly "survey programs" offered by private consultants proved of substantial value.

Housing is a primary health problem. The American Public Health Association committee has spent more than $50,000 in developing a procedure for the Appraisal of the Quality of Housing, based on fundamental health needs, which has been demonstrated as practical and reliable. Housing agencies may be under considerable pressure to adopt other procedures which are supposedly simpler but cannot yield valid and significant results. Where housing surveys are contemplated, the health officer is well within his rights in urging that the task be approached along sound scientific lines.

REFERENCES

1. The only other measure of domestic importance is the Act for further grants under the Hospital Construction Act.
2. Obtainable from the American Public Health Association offices, 1790 Broadway, New York 19, N. Y.

EUROPEAN MORTALITY RATES

A RECENT statistical report of the World Health Organization[1] contains a highly suggestive review of the death rates of fourteen Western European countries, from 1901 to 1947.

In 1901, the spread between various national rates was considerable. The lowest rates of deaths per 1,000 population were in Norway (15.0), Denmark (15.7) and Sweden (16.0). The highest were in France (20.1), Finland (20.6), Portugal (20.9), Italy (22.0), and Spain (27.8).[2]

In 1947, the lowest rates were reported for the Netherlands (8.1), Norway (9.3), and Denmark (9.7). The highest rates were reported for France (13.0), Belgium (13.1), Portugal (13.3), and Ireland (14.9).

The greatest reductions in the period were 58 per cent for Spain, 53 per cent for the Netherlands, 48 per cent for Italy, and 45 per cent for Finland. The lowest rates of reduction were 27 per cent for England, 24 per cent for Belgium, and 13 per cent for Ireland. That states with initially high rates, such as Spain, Italy, and Finland should show marked proportional decrease is natural; but the record for the Netherlands is highly creditable. That of Ireland is the most discouraging phenomenon in the picture.

A specially interesting feature of this tabulation is the effect of the war years.

Only five states showed clear evidence of such an influence, as indicated below.

	Highest Rate	*Year*	*Excess over Pre-war Rate*
Finland	19.0	1941	54%
The Netherlands	15.3	1945	53%
France	18.5	1944	25%
Belgium	16.1	1940	23%
Italy	15.9	1944	19%

REFERENCES

1. *Epidemiological and Vital Statistics Report.* World Health Organization 2, 4:64 (Apr.), 1949.
2. Data for Germany not available since 1943.

WHO Foreign Study Fellowships

The World Health Organization is offering in 1950 9 to 12 fellowships for foreign study in the field of health to students from the United States. A Fellowship Selection Board, set up by Surgeon General Leonard A. Scheele, consists of Walter A. Bloedorn, M.D., Association of American Medical Colleges; Hugh Leavell, M.D., American Public Health Association; and Joseph W. Mountin, M.D., Public Health Service; with H. R. O'Brien, M.D., of the Public Health Service as secretary.

For 1950, applications will be considered in the fields of public health administration, malaria, tuberculosis, maternal and child health, venereal diseases, sanitation, nutrition, and mental health.

Applicants must be engaged in some form of full-time public health work, including medical or nursing education. In evaluating applications the Board will take into account the ability of the individual and the value to his community or his country of the training he will receive abroad. Special consideration will be given to such persons as those in charge of training centers or teachers in medical or other schools (especially in Preventive Medicine or Tropical Diseases). An advanced degree or Board certification is desirable. Knowledge of the language of the country to be visited is valuable. In general, non-federal workers will be preferred.

Grants are for periods of from 2 or 3 months for observation, up to 12 months for study. WHO provides transportation and a monthly stipend of $200 for those studying in one place, $300 for those moving about. For the 1950 fellowships, applications must be filed in triplicate by March 1, 1950. Application blanks may be obtained from the Educational Programs Branch, Office of International Health Relations, U. S. Public Health Service, Washington, D. C.

Seven fellowships already awarded for 1949 include the following:

Teachers of preventive medicine in undergraduate medical colleges:
Lloyd Florio, M.D., University of Colorado
Edward A. Krumbiegel, M.D., Marquette University

Tuberculosis rehabilitation:
William A. Winn, M.D., Tulare-Kings County (California) Sanatorium

Training of dental hygienists in New Zealand:
John Fulton, D.D.S., U. S. Children's Bureau

Engineering curricula in Europe:
Professor Harold B. Gotaas, University of California

Nutritional study in Great Britain:
A. Hughes Bryan, M.D., University of North Carolina

Local Health Officer:
John Thrash, M.D., Muskogee County, Georgia

Clearing House on Public Health Salary Information and Personnel Needs

A THIRD STATE SALARY STUDY

The third in a series of annual studies of state health department salaries made by the Public Health Service in coöperation with the Association of State and Territorial Health Officers and the American Public Health Association has just been released. As in earlier reports the material is shown almost entirely in tabular and graphic form with little interpretive analysis. The study thus constitutes in effect the raw data from which can be selected material for further analysis to meet specific needs. As an aid to specialized analysis, tabular data are shown by Federal Security Regions.

Aside from the fact that statistical personnel are included for the first time, the present report is significant chiefly because it is now possible to spot at least short-time trends. There is no questioning the fact that public health salaries are rising; whether sufficiently or fast enough, to be determined by specific local or regional conditions. Median salary ranges for each group have increased; from 7 per cent for professional laboratory workers to nearly 50 per cent for sanitation personnel apart from sanitary engineers. Medical personnel salaries, apart from health officers, have increased nearly one-fourth in the 3 year period.

Program directors' average salaries have increased from 11 per cent for laboratory directors to 20 per cent for directors of local health services, of tuberculosis control, and of public health nursing. Average salaries of health officers increased 18 per cent. Probably for reasons not far to seek, among medical program directors the lowest paid and the smallest percentage increase were reported for directors of maternal and child health services; similarly the lowest paid of all program directors in 1947 were public health nursing directors, although by 1949 they had yielded this distinction by a small margin to vital statistics directors.

In the current study 6 state health officers are reported with salaries of $12,000 or more; in 1947 there were but 2, and in 1948, 4. The latest study reports 18, or more than a third of the state health officers, receiving $10,000 or more annually; in 1947 the number was 4, and in 1948 it had reached 14. These figures are but sample illustrations of the type of material that can be found in this series of studies. Comparisons in terms of neighboring states, similar population groups, similar economic status, or comparable positions can be selected from this material for use with appropriating and citizen bodies. For example, the relative rank of a state in terms of the salary paid to the different types of program directors may have a number of implications not all of which point to disparity.

This latest study is available for distribution in limited quantities from Committee on Professional Education, A.P.H.A., 1790 Broadway, New York 19.

LABORATORY SALARIES

Salary information for professional laboratory personnel of state health departments as of July, 1949, has been compiled by C. A. Perry, Director of Laboratories of the Maryland State Health Department and is published in the September *The Public Health Laboratory*. This, it will be remembered, is the Bulletin of the Conference of

State and Provincial Public Health Laboratory Directors. This material is a valuable supplement to the state salary study discussed above in that it analyzes salaries for laboratory workers in five position classifications below that of director. It also shows position titles separately for those states whose classifications do not fit the pattern adopted. The editor of *The Public Health Laboratory* is Edmund K. Kline, Box 573, Olean, N. Y.

A SECOND SURVEY BY LOUISIANA

The Louisiana State Health Department in January, 1948, made a telegram survey of salaries for 30 classes of positions common to state health agencies. As of September, 1949, it repeated the survey, this time for 71 different classes of positions, many of them found in only a few of the 43 states included in the study. A careful comparison of salaries for titles that are common to the two studies should throw some light on whether it has been a useful means of making state fiscal officers "salary conscious" and thus presumably of raising the general level of Louisiana's public health salaries. It is to be supposed that the study is available from the Louisiana Merit System, Capitol Annex, Baton Rouge, La. The revised compensation plan effective January 1, 1950, is definitely offered to readers.

HOSPITAL SALARY SURVEY

The 4th consecutive annual hospital salary survey covering the year 1948 was recently published by the American Hospital Association. "For all categories of personnel surveyed," it says, "salaries increased approximately 10 per cent in 1948 over 1945." Only 5 categories of personnel are included but they represent the large majority of hospital employees, general duty nurses, untrained women, untrained men, clerks, and practical nurses. Of more than 4,600 hospitals receiving questionnaires 53 per cent replied. Detailed analysis of data by state and region, by size of hospital and community, by type of hospital and type of ownership results in 131 statistical tables.

OCCUPATIONAL OUTLOOKS

Recruitment, counseling, and personnel officers should be aware of the fact that the Bureau of Labor Statistics of the U. S. Department of Labor has an occupational outlook research program. Through this program it attempts to make information generally available on relative opportunities in various occupations. Although it is largely devoted to industrial occupations it has limited relevance for public health as well.

Bulletins 863 and *881*, published in 1946, are on Postwar Outlook for Physicians and Factors Affecting Earnings in Chemistry and Chemical Engineering respectively. Currently in press is Employment Outlook for Engineers.

The Occupational Outlook Handbook — Employment Information on Major Occupations for Use in Guidance is a comprehensive 454 page report originally prepared for use by the Veteran's Administration, but brought up to date in 1949 for general use in guidance agencies. Each of these is available from Superintendent of Documents, Govt. Ptg. Office, Washington 25, D. C., the bulletins at 10 cents each, the book at $1.75.

BOOKS AND REPORTS

All reviews are prepared on invitation. Unsolicited reviews cannot be accepted.

Mental Hygiene in Public Health —*By Paul V. Lemkau. New York: McGraw-Hill,* 1949. 396 pp. Price, $4.50.

This volume is largely based on Dr. Lemkau's course in mental hygiene, and its dual dedication to Adolf Meyer and Allen W. Freeman, indicates its two-fold source of inspiration in the visions of these leaders of psychiatry and of public health.

Mustard has told us that "a health problem becomes a public health responsibility if or when it is of such a character as to be amenable to solution through systematized social action." These conditions are fully met in the challenge presented by mental and emotional abnormalities; and mental hygiene was listed by eight of our state health departments in a recent issue of this *Journal* as among their chief program objectives at the present time. Connecticut established the first division of mental hygiene in a state department in 1920; and the U. S. Public Health Service created a division of mental hygiene in 1930. Dr. Lemkau points out that the relations between psychiatry and public health have been for the most part "immature and perhaps idealistic." ("Immature" is a harsh word, in the language of modern psychiatry!) This is due on the one hand to the fact that most psychiatrists of an older generation, preoccupied with the advanced and often hopeless case, had nothing to offer along lines of prevention; and, on the other hand, to the lack of training in most schools of public health of the kind offered by Dr. Lemkau at the Hopkins.

Dr. Lemkau's basic thesis is, of course, that the human personality is of primary importance in individual and social health; and that this personality, at a given moment, is the result of interaction between the hereditary basis of personality structure and the total of life experiences impinging on that structure. To control these environmental factors is a legitimate and ultimately inescapable task of public health. The reviewer believes that the modification of such stresses and the guidance of the individual in meeting them successfully is sure to be recognized ultimately as even more important (even if also more difficult) than the measures now taken for the prevention and early treatment of infectious and nutritional diseases.

The bulk of Dr. Lemkau's book is devoted to an exposition of the nature of this problem as it should be understood by the health officer. It is not highly technical psychiatry (or the present writer could not have undertaken its review). Neither is it one outline of health department machinery for mental health services. It is a clear and non-controversial outline of what the common emotional maladjustments are, and what personal counseling and family and social adjustment may do to create and preserve mental health. These problems are reviewed as they present themselves at chronological phases of the evolution of the individual. Chapters deal, in detail, with the Prenatal and Natal Period, The Period of Infancy, The Pre-School Period, The School Period, The Adolescent Period, The Young Adult Period, The Period of Middle Age and the Period of Old Age. This type of presentation will appeal directly to the various health department specialists in obstetrics, pediatrics, school health, venereal disease control, tuberculosis control, geriatrics, and the like. In many cases, the points made

are illustrated by well chosen and effective case histories.

There is nothing startling or dramatic about this book. It will not make the headlines, like a speech by Chisholm. We believe, however, that the public health worker, physician, nurse, educator, engineer, who reads this book will find his understanding of basic mental hygiene problems clarified and his recognition of those problems quickened. The success of every health department clinic, in whatever field, depends on mental hygiene. The core of the work of every good public health nurse is mental hygiene. Such new procedures as childbirth without anesthesia, and rooming-in for infants are primarily mental hygiene technics. The effectiveness of all health education depends on mental hygiene. The sound administration of a health department and the public relations of such a department require the applications of mental hygiene.

To all our readers then—and also to the intelligent citizen who is not a professional public health worker—we heartily recommend *Mental Hygiene in Public Health.* C.-E.A. WINSLOW

Office Management for Health Workers—*By Frances King and Louis L. Feldman. New York: Commonwealth Fund,* 1949. 158 pp. Price, $2.25.

With the progressive extension of public health activities and services to the relatively unsettled and rural areas of the nation, the need for specific instruction in basic office management has become acute. While in the cities and urban areas a public health department often has available the advice and facilities of well organized and experienced governmental units, as well as commercial resources, the outlying areas have been left to their own ingenuity and imagination in the organization and operation of the unavoidable office management functions.

Office Management for Health Workers provides a valuable resource and reference book for public health workers who must set up administrative procedures and office facilities. The elementary guideposts are carefully outlined, with helpful suggestions as to the practical aspects of operations. Written in a clear and exceedingly readable style, public health administrators will gain from reading this book a stimulation to perform tasks the "easy" way.

The authors begin by presenting some cogent observations relative to the operation of an office. Following are matter-of-fact outlines of the physical set-up and equipment of an office, the fundamentals of form design and a discussion of files, reports, records, histories, surveys, and certain other operations that transpire in public health and, indeed, in most offices. While some of the material in the book appears somewhat obvious and routine, no doubt it is helpful, even to veterans, to review the accepted procedures and well established methods which seldom have been documented. But the principal value of a study of the book will be for the beginners in the office management field who will find in it a wealth of practical information. ROBERT G. WEBSTER

Rural Welfare Services—*By Benson Y. Landis. New York: Columbia University Press,* 1949. 201 pp. Price, $3.00.

Dr. Landis, who is now Executive Secretary of the Committee on Town and Country, has worked on the betterment of rural life for many years. Against a background of the general sociology of rural life and the trends in its development of social services, his book gives succinct descriptions of the principal federal, state, and local programs—official and voluntary—designed to promote security and "the good life" for country dwellers.

The description of the administration

of the programs of old age and survivors' insurance, veterans' benefits, and public assistance, categorical and general, are relevant for workers in city and country alike. Red Cross activities and voluntary efforts in youth services and recreation are described with enthusiasm. The fundamental and far-reaching services of the Farmers Home Administration and the Agricultural Extension Service, on the other hand, are given less relative attention perhaps than is warranted.

Considerable space is devoted to health services in rural areas. The data on public health organization and coverage are well presented, but the account of the difficulties in rural medical care is somewhat topical, rather than comprehensive. It is regrettable to find the vast and basic subject of nation-wide medical care insurance described as having been "agitated" and disposed of in a terse six lines.

As a brief manual for health workers who want a birdseye view of welfare programs in their communities, the book should prove useful.

MILTON I. ROEMER

My Place To Stand—*By Bentz Plagemann. New York: Farrar, Straus,* 1949. 241 pp. Price, $2.75.

This is a psychological biography with a strong religious bent of the process of reaching maturity through the experiences of the Navy and poliomyelitis. The author is a sensitive and introspective individual. The book is described as a "biography of an illness" and part of it certainly is. The first 175 pages are the account of the problems of adaptation to the war and impending combat. A substantial part is concerned with life at the Warm Springs Foundation.

The book is most interesting, but it is not comfortable to read. The discomfort arises from two sources. Rapid swings from philosophical heights to the mundane or even trivial is one source. The other is that the reader rather often has the feeling that he is eavesdropping on a mental therapy session. A trivial irritation arises from the consistent misspelling of "tuberculous."

Several concepts will provoke discussion among physicians and public health workers. There is an opportunity to gain insight into the medical care in the armed forces and how it is regarded by a patient. Character changes resulting from the disciplines of an attack and recovery from "polio" are explored and changes in President Roosevelt are considered. The possibility of an attack of poliomyelitis being in part due to psychic factors or some other guiding force is provocative. It is interesting to note that the incubation period seems to have been the usual one.

The work is useful in stimulating the reader to do some thinking about his own relevant notions and in extending the understanding of readers regarding infantile paralysis. Writing the volume was probably a valuable experience for the author in understanding himself. It could be an interesting case study for inservice training sessions for a variety of social scientists.

ROSCOE P. KANDLE

Epilepsy and Convulsive Disorders in Children—*By Edward M. Bridge, New York: McGraw-Hill,* 1949. 670 pp. Price, $8.50.

Epilepsy is primarily a disorder of childhood, yet, judging by volume of writing, pediatricians have been little interested in it. Jean Taxil's 300 page book, *De L'Epilepsie—aux petits enfants,* printed in French in 1602, has had no worthy successor. The book by Bridge makes good much of this deficiency.

The original contribution made by this work is statistical, a study of 742 children with seizures seen at a clinic at the Harriet Lane Hospital in Baltimore. This core of solid experience provides a realistic and balanced discussion of the

etiology and the various manifestations of epilepsy, particularly the physical and psychological aspects.

The general application of these data is somewhat impaired by the clinic selected cases, institutional patients, and those of the "private patient" category being excluded. Also much of the conclusion-based information was gathered prior to the discoveries in neurophysiology and drug therapy of the last few years. Thus, abnormal cerebral circulation is still viewed with suspicion as an immediate cause of seizures.

Electroencephalography receives a well written 20 page discussion, but the lessons of this technique are not integrated with the background thinking of the book. The sections on the social personality and psychological problems are particularly well done—and rather overshadow discussions of direct therapy. Thus, against 60 pages given to psychotherapy, there are 8 on the use of drugs, of which bromides receive the most attention and mesantoin only passing reference. Some 45 pages are given to the now little used fasting and ketogenic diet.

The attitude toward epilepsy is refreshingly optimistic and constructive. A mass of useful information is presented. The language is simple and clear and not above the understanding of the intelligent lay reader, whose interest presumably will be stimulated by numerous poster-like illustrations. The 36 figures are clearly drawn and pertinent. References conclude each chapter and are assembled at the end. Altogether this book should be in the hands not only of pediatricians and doctors, but large portions can be read with benefit by social workers, school teachers, and all those who deal with seizured children.

WILLIAM G. LENNOX

Heating, Ventilating, Air Conditioning Guide, 1949—*New York: American Society of Heating and Ventilating Engineers,* 1949. 1,384 pp. Vol. 27. Price, $7.50.

This, the 27th Edition of the Guide, brings previous issues up to date. Twenty-four of the 52 chapters have had appreciable changes or additions made to them. The chapters on "Physiological Principles," and "Air Conditioning in the Prevention and Treatment of Disease," should be of interest to the general public health worker. The balance of the volume should also be of interest to the engineering personnel on the public health staff—including the industrial hygiene engineer, whatever be his assignment.

As in previous volumes, principles are considered first, followed by a discussion of human reaction to atmospheric environment. Methods of computing heating and cooling loads; heating systems and equipment; air conditioning; and special applications complete the list of general topics. Each chapter is followed by an extensive bibliography, including 1948 references. Not least valuable is the final quarter of the volume, some 400 pages, which is given over to advertisement of equipment, materials and publications.

FRANCIS B. ELDER

A Boy Grows Up—*By Harry C. McKown. (2nd ed.) New York: McGraw-Hill,* 1949. 333 pp. Price, $2.40.

Helping the teen-age boy in his transition from boyhood to manhood is a most worthy objective. The success of this book in its first (1940) printing has inspired McKown to the additions and rewriting which make this second edition of even greater usefulness. His case stories are well chosen, his practical advice good, and his twenty-page bibliography is one of the best we have seen. It is the kind of book, though, that a youngster would read for profit rather than pleasure.

Lest the volume—because of its title—be considered merely a social hygiene compendium, let us say that it deals with

manners, recreation, vocational guidance, health, and ethics. In fact its organization is more sociological than physiological. But such old reliable subjects as reproduction, petting, and getting along with the "whimsical female" are dealt with soundly and accurately, although with occasional reversions to ancient attitudes. In one of his paragraphs on "Your New Maturity" (p. 210), for example, the author says, "Having intercourse with prostitutes . . . is the main source of several body-destroying, mind-destroying, and soul-destroying diseases." That is all. He does not name the diseases nor give any better defined reference.

The book is one that might well be included in every library—home, church, or school—where boys either browse or borrow books. Many lads, however, will wish it were less textbookish and more "whodunit" in style.

RAY H. EVERETT

Food Poisoning—*By G. M. Dack. (rev. ed.) Chicago: University of Chicago Press,* 1949. 184 pp. Price, $3.75.

Written by an author more familiar with the wide scope of the field than any other in the country, this revised edition summarizes present knowledge of food poisoning in a comprehensive and detailed manner. The author discusses many laboratory procedures which have been proposed for use in investigating outbreaks due to the various agents discussed. His personal experience in the use of many of these makes his appraisal of them invaluable to the reader.

The general treatment is in language understandable by the average reader, but many may become entangled in the scientific details and find it necessary to leave portions to those with special training. The book is, therefore, invaluable to the epidemiologist and laboratory worker, who must discover the etiology and source of food-borne outbreaks, and collect information which can guide, control measures. It can be read with profit, however, by many other health workers, including sanitarians and food inspectors.

Selected references to the literature make it possible for the reader to explore most of the subjects further and obtain additional details when needed. There is an author index as well as a subject index.

ROY F. FEEMSTER

A Baby is Born—The Story of How Life Begins—*By Milton I. Levine, and Jean H. Seligmann. New York: Simon and Schuster,* 1949. 54 pp. Price, $1.50.

Public health people and educators will be able to tell mothers, "There is a new book that will help answer the 'How did I get here?' questions." Much credit for its attractiveness goes to Eloise Wilkin, artist, whose illustrations of babies and children are charming. It is written primarily for early elementary years.

The really inquisitive child may be interested in the fish, hen, and cow sequence of how the sperm gets to the egg. What we have here is a variation of the birds, bees and butterflies theme. Since today in our urban culture relatively few children have an opportunity to observe the mating of fish, hens, or cows, it is doubtful whether such comparisons really help explain the puzzle of human coitus. The experience of some reproduction education specialists shows that many little children are quite willing to skip such explanations.

Those who believe in the concept of "developmental tasks" will question the "telling everything" to very little children. Growth of a warm, satisfying child-parent relationship is of much greater importance in reproduction education (and in later years in genuine sex education) than "all the facts."

It might be well if people who were going to write books on sex education would ask psychologists for answers to such questions as these: Do diagrams of

the reproductive organs of man and woman mean much to little children? Should we write about "pains" or "contractions" or discover another way of explaining birth? Is the explanation of human coitus either necessary or accurate enough to be helpful to youngsters? Parents say: "We were told little or nothing. Should we tell our boys and girls everything?" Parents need help on developing a philosophy about reproduction and sex education more than they do books on the "facts." This book is essentially one that deals with the "facts."

It is good to find the love of father and mother for each other and their wanting children emphasized. Depending on their cultural backgrounds, some parents will find the book useful; others will not be able to use parts of it.

DAVID B. TREAT

Public Health and Hygiene—*By Charles Frederick Bolduan and Nils William Bolduan (4th ed.) Philadelphia: Saunders,* 1949. 423 pp. Price, $4.25.

"Public health is purchasable; within natural limitations a community can determine its own death rate." This statement by Biggs, so aptly utilized in the text by the authors, gives the key to the *Why* of Public Health.

As an elementary treatise, *Public Health and Hygiene* will prove invaluable to the beginning student and to the laymen who wish a painless method of studying the subject.

The organization of the book into the five main sections is quite logical. First, the general introduction offers a valuable survey of medical history, most interestingly developed, with the fundamentals of bacteriology, entomology, and nutrition. However, Chapter 8 on Social and Economic Factors in Public Health is the highlight of this first section.

The More Important Communicable Diseases, Section 2, are concisely described and their relative importance revealed. The discussion of causative agents and their mode of spread aids greatly toward the better understanding of control methods. The Important Noncommunicable Diseases and Conditions of Section 3 are treated in the same terse manner.

Section 4, Community Hygiene, covers the elements of environmental sanitation, relating these to industrial hygiene. Maternal and Child Hygiene, School Health, Public Health Nursing, and Health Education are considered in this overall survey of community problems.

Health Administration, comprising the last portion of this study, evaluates administrative control of health measures in terms of organizations, economics, and methods. It gives the reader substantial insight into the federal and state administrative functions in the field of public health, without losing his interest in a maze of bureaus, departments, etc.

One is a bit disappointed that more was not written on a positive approach to mental health, and the importance of the family in preventing mental difficulties. Likewise, the notes on health education failed to emphasize the importance of coördinating community organizations, facilities, and individuals to work together toward the ultimate goal of optimal health for all.

The authors should be congratulated on this study, so pertinently packed with informative data, statistics and observations on the general field of public health.

W. W. STILES

Accident Facts—*By the National Safety Council. Chicago: National Safety Council,* 1949. 96 pp. Price, $.60.

Public health workers again are indebted to the National Safety Council for the 1949 edition of *Accident Facts*. The increasing recognition of accident prevention as a fruitful and proper function for health departments makes this book particularly useful. The terms used in this publication are carefully defined.

Dickinson's claim that accidental deaths cause more loss of working years than any disease is presented.

This is an outstanding record of the epidemiology of accidents where one will find geographic, seasonal, age and occupation studies, together with estimates of frequency and of severity in various occupations. According to this record, the frequency rate for occupational injuries was down 13 per cent from the preceding year, 1947, and the severity rate down 9 per cent. The downward trend of motor vehicle deaths on a mileage rate basis continues to be encouraging. REGINALD M. ATWATER

The Natural History of Mosquitoes—*By Marston Bates. New York: Macmillan,* 1949. 379 pp. Price, $5.00.

This beautifully written volume is an interesting and orderly presentation of facts concerning the environment and behavior of mosquitoes. Because of the necessity of identifying and controlling species which are dangerous vectors of disease, a large literature has accumulated concerning these and other aspects of mosquito lore, including ecology and physiology. Much of this incidental information is sequestered in specialized scientific journals rarely seen by students of biological theory. Dr. Bates invites attention to this rich but relatively unexploited source of knowledge about mosquito behavior. He believes this should be especially valuable to those interested in speciation, taxonomy, organic diversity and evolution, population dynamics, etc.

The content of the book falls into three main categories. Following the introductory section, the first eleven chapters—almost three-fifths of the total text—deal with the environmental and functional responses of mosquito adults, eggs, larvae, and pupae. The next three chapters—one-sixth of the text—are an excellent discussion of the relations of mosquitoes to other organisms, especially in the vectoring of pathogens. The third section presents the species problem, information concerning classification and distribution of mosquitoes, techniques in mosquito study, and the strategy of mosquito research as the author views it. The Appendix includes a systematic list of mosquito species, a 45 page bibliography, and an index.

Throughout the book, the factual content is enlivened and enriched by the author's comments, interpretations, and conclusions, the fruit of his unhindered reflections in the llanos of Colombia.

While avowedly written to catch the eye of "academic biologists," *The Natural History of Mosquitoes* is highly recommended to medical and other entomologists, parasitologists, malariologists, virologists, epidemiologists, and students of tropical medicine and hygiene. They are certain to find passages of special interest to them, but the reviewer's bet is that they will read the entire book with interest and appreciation. JUSTIN M. ANDREWS

Toxic Eye Hazards—*A Manual Prepared by the Joint Committee on Industrial Ophthalmology of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology—Publication 494. New York: The National Society for the Prevention of Blindness,* 1949. 101 pp. Price, $1.00.

The injurious effects of solid substances striking the eyeball have long been recognized in the American safety movement. In certain segments of American industry, great strides have been made in the protection of the workers' eyes against such solid flying materials.

The tremendous growth and complexity of the chemical industry has served to increase the eye hazard in this industry. For a long time there has been a real need of a compilation of the effects of chemical substances on the eyes.

The present pamphlet is very timely in that it fills this gap in the American industrial hygiene literature. The effects of organic compounds, inorganic compounds, and miscellaneous compounds and materials are set forth in tabular form, along with references to the basic information from which the tables have been prepared.

A very brief outline of emergency and first-aid procedures in chemical eye injuries serves to add to the value of this pamphlet.

The section entitled "A Well-Organized Eye Protection Program" presents a few of the fundamentals of the approach to protection. In this section two valuable tables are presented which indicate the type of protective equipment desirable in certain occupations and in certain chemical exposures.

For the specialist in the field of eye protection, as well as for the safety engineer in the chemical industries, the pamphlet fills a real need.

LEONARD GREENBURG

BOOKS RECEIVED

Listing in this column acknowledges the receipt of books and our appreciation to the senders. Space and the interests of readers will permit review of some, but not all, of the books listed.

ADVANCES IN PEDIATRICS. Vol. 4. Edited by S. Z. Levine, Allan M. Butler, L. Emmett Holt, Jr., and A. Ashley Weech. New York: Interscience, 1949. 316 pp. Price, $6.50.

AMERICAN FAMILY, THE.—A FACTUAL BACKGROUND. Report of the Inter-Agency Committee on Background Materials, National Conference on Family Life, May, 1948. Washington: U. S. Gov. Ptg. Office, 1947. 457 pp. Price, $1.25.

CHICAGO-COOK COUNTY HEALTH SURVEY, THE. Conducted by the U. S. Public Health Service. New York: Columbia University Press, 1949. 1267 pp. Price, $15.00.

CLINICAL DIAGNOSIS BY LABORATORY EXAMINATION. John A. Kolmer. New York: Appleton-Century, 1949. 1212 pp. Price, $12.00.

DENTAL CARIES. CLINICAL AND EXPERIMENTAL INVESTIGATIONS. T. Ockerse. Pretoria, So. Africa. Department of Health. 80 pp.

EDUCATION FOR SAFE LIVING. (2nd ed.) Herbert J. Stack, Elmer B. Siebrecht and J. Duke Elkow. New York: Prentice-Hall, 1949. 447 pp. Price, $3.75.

FOR THE NEW MOTHER. Mildred V. Hardcastle. Philadelphia: John C. Winston, 1949. 163 pp. Price, $2.00.

HEARING TESTS AND HEARING INSTRUMENTS. Leland A. Watson and Thomas Tolan. Baltimore: Williams & Wilkins, 1949. 597 pp. Price, $7.00.

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON LABOR AND PUBLIC WELFARE UNITED STATES SENATE. 81st Congress. National Health Program, 1949. Washington: Gov. Ptg. Office, 1949. Part I and Part II, 1247 pp.

HYGIENE AND PUBLIC HEALTH. Earl B. Erskine. New York: Prentice-Hall, 1949. 322 pp. Price, $3.75.

MALARIA, THE BIOGRAPHY OF A KILLER. Leon J. Warshaw. New York: Rinehart, 1949. 348 pp. Price, $3.75.

NUTRITION. (4th ed.) Margaret S. Chaney and Margaret Ahlborn. Boston: Houghton Mifflin, 1949. Price, $3.90.

NUTRITION SURVEYS: THEIR TECHNIQUES AND VALUES. Washington: National Research Council, National Academy of Sciences, 1949. 144 pp. Price, $1.50.

RED CROSS NURSE IN ACTION 1882–1948. Portia B. Kernodle. New York: Harper, 1949. 506 pp. Price, $5.00.

STEDMAN'S MEDICAL DICTIONARY. (17th ed.) Edited by Norman Burke Taylor and Allen Ellsworth Taylor. Baltimore: Williams & Wilkins, 1949. 1361 pp. Price, $8.50.

SURVEY OF BIOLOGICAL PROGRESS. Vol. I. Edited by George S. Avery, Jr. New York: Academic Press, 1949. 396 pp. Price, $6.80.

TROPICAL DISEASES, AN EPITOME OF THE LABORATORY DIAGNOSIS AND TREATMENT OF. (2nd ed.) Horace M. Shelley. New York: Staples, 1949. Price, $2.25.

VITAMINS IN MEDICAL PRACTICE, THE. J. Shafar. New York: Staples, 1949. 383 pp. Price, $4.50.

A SELECTED PUBLIC HEALTH BIBLIOGRAPHY WITH ANNOTATIONS

RAYMOND S. PATTERSON, PH.D.

This Will Surprise You—". . . the hazard of death by accident has been greatly reduced. In the years 1946–1948, accidental deaths . . . at ages 1 to 74 years occurred at the rate of 43.4 per 100,000, or only a little over half the incidence of the period 1911–1915. . . ." There is still room for improvement.

ANON. Progress in Safety. *Stat. Bull.* (Met. Life Ins. Co.) 30, 9:1 (Sept.), 1949.

Quote—Dental health education no longer can be limited to the statement "see your dentist every six months." There are effective, economical ways to prevent and control dental disease. Only a well informed public can make the best use of them. Unquote.

BROWN, H. K. The Present Status of Dental Preventive Measures. *Canad. Pub. Health J.* 40, 9:382 (Sept.), 1949.

Science by Pronouncement—This item is as wide of the field of public health as any that has wandered into our fickle guide for the tractable. Here is the last sentence: "But for the grace of all who have fought for the freedom of the human mind, each of us stood in Moscow on August 7 last, and heard the words of doom: 'The Central Committee of the Party examined my report and approved it.'"

COOK, R. C. Lysenko's Marxist Genetics. *J. Hered.* 40, 7:169 (July), 1949.

Wholesale Health—How we love to roll new and high-sounding words over our tongues! Now it's "multiphasic" that is destined to become as overworked as "level" and "positive health." A multiphasic screening program will appeal to patient, health worker, and taxpayer. It will foster teamwork, reduce costs in money and misery. Few communities are so resourceless that they could not support a program once they appreciate its advantages. These are only a few of the pros.

CHAPMAN, A. L. The Concept of Multiphasic Screening. *Pub. Health Rep.* 64, 42: 1311 (Oct. 21), 1949.

Not To Be Missed—This is a badly needed paper but with—for me—not the happiest of titles, because I cannot restrain myself from adding, "and everybody's business is nobody's." People can be inveigled into taking a hand in community health promotion, the writer insists. Techniques for behind-the-scenes string-pulling, he sets forth in instructive detail.

DERRYBERRY, M. Health Is Everybody's Business. *Pub. Health Rep.* 64, 41:1293 (Oct. 14), 1949.

Pointed Remarks on Polio—If you could do with a little chastening, and chances are good you could, then read this paper which begins with critical comment on freehand researching and conclusion-jumping. Though the paper is concerned with polio, you may be able to read into it some warnings against easy assumptions in your own field. It is long and calls for concentration, but the results should be salutary.

HAMMON, W. McD. Immunity in Poliomyelitis. *Bact. Rev.* 13, 3:135 (Sept.), 1949.

On the Whole, Good—A pediatrician, practising outside London, gives a sympathetic picture of the first year's experience with the British National Health Service. Mostly we've heard from the G. P.'s. If you are interested in forming a rounded picture of the "biggest operation ever known in

medicine," you will want to add this item to your collection.

ILLINGWORTH, R. S. First Year of the British National Health Service. *Pediatrics* 4, 4:516 (Oct.), 1949.

Normal Phenomenon?—Like the music in the horn, pediatric ideas seem to go round and round. In this study of thumb-sucking it is recorded that babies who enjoyed that hideously insanitary, never-to-be-condoned, dummy teat did not become thumb-suckers. Sucking satiety is not the only factor in prevention but it is certainly one.

KLACKENBERG, G. Thumbsucking; Frequency and Etiology. *Pediatrics* 4, 4:418 (Oct.), 1949.

It Helps, But—It's asking the tail to wag the dog, he insists. Artificial vaccination (with BCG) probably does not produce results superior to natural vaccination, yet natural vaccination fails to control tuberculosis. It seems illogical to base a major attack against a disease on a skirmish against a minor phase of it. His advice is to stick to the big problem—unrecognized TB.

MEDLAR, E. M. Prophylactic (BCG) Vaccination to Control Tuberculosis. *J.A.M.A.* 141, 9:593 (Oct. 29), 1949.

Progress Report—Three universities are offering advanced courses in mental hygiene for public health nurses. The first graduates are at work as consultants in official and voluntary agencies.

PEASE, S. H. Public Health Nursing and Mental Hygiene. *Pub. Health Nurs.* 41, 10: 521 (Oct.), 1949.

Survey Pitfalls—Life is hard for the researcher in the field. He can gauge the people's health by diet surveys or by blood sampling, but he'll find precious little relationship between reported diet and blood values. Wide differences are found in the correlation between nutrient intake and plasma content. The mathematical procedures used to reach this discouraging conclusion were way over my head but they look convincing.

PUTNAM, P., *et al.* The Statistical Association Between the Diet Record and Ascorbic Acid Intake and the Blood Content of the Vitamin in Surveyed Populations. *Milbank Mem. Fund Quart.* 27, 4:355 (Oct.), 1949.

Getting Rid of Rats—Successful rat control programs are those that never stop. The toughest job is convincing the public that rat-infestation is a serious menace to health. A questionnaire was sent and this is to be the overall picture of what is being done. Part II will follow.

SNYDER, C. W. A Survey of Urban Rat Control in the U. S. A. *Modern San.* 1, 6:14 (Oct.), 1949.

NRC Committee Report—As brucellosis in human beings comes solely from infected domestic animals, public health has a stake in the difficult veterinary problem of control. Only the destruction of infected animals will do the job, and thus far that hasn't been practical. Aureomycin might do the trick but at present-day prices the cost is prohibitive.

SPINK, W. W., *et al.* Control and Eradication of Brucellosis in Animals. *J.A.M.A.* 141, 5:326 (Oct. 1), 1949.

Left to right: Dr. George Baehr; Mr. M. Albert Linton; Marion W. Sheahan, R.N.; Dr. Andre Cournand; Dr. L. R. Christensen; Dr. Max Theiler; Dr. Edward C. Kendall; Dr. Philip Hench; Dr. Haven Emerson; Dr. William S. Tillett; and Mrs. Albert D. Lasker.

THE LASKER AWARDS FOR 1949

The American Public Health Association for the fourth year, through the presentation of the Albert and Mary Lasker Foundation Awards, acknowledges outstanding contributions to scientific research related to diseases which are the most frequent causes of death and disability, and for distinguished services in the field of public health. The Awards both honor the recipients by dramatizing their accomplishments and seek to stimulate public and professional interest in any such work designed to provide a more healthful and happier lifespan for man.

The Lasker Awards for 1949 were conferred on October 25, 1949, at the First General Session of the 77th Annual Meeting in New York, N. Y. Eight individuals and two groups were honored:

DR. HAVEN EMERSON of the American Public Health Association and The National Health Council—a *Special* Lasker Award—"for extraordinary achievement in developing a program for complete local health service in every area of the U. S."

DR. ANDRE COURNAND of Columbia University "for outstanding contributions to the physiology of the circulation in man and the diagnosis and treatment of heart disease."

MARION W. SHEAHAN, R.N., of the National Committee for the Improvement of Nursing Services "for distinguished leadership in the fields of nursing and public health."

DR. MAX THEILER of The Rockefeller Foundation "for distinguished experimental work leading driectly to the production of two effective vaccines against yellow fever."

DR. WILLIAM S. TILLETT AND DR. L. R. CHRISTENSEN of New York University jointly, "for discovery and purification of streptokinase and streptodornase and demonstration of their effectiveness in treatment of certain human diseases."

DRS. EDWARD C. KENDALL AND PHILIP S. HENCH of the Mayo Clinic, jointly, "for their studies of adrenal hormones which culminated recently in the dramatic therapeutic effect of Cortisone in rheumatic disorders."

THE LASKER GROUP AWARD FOR 1949 HONORS:

THE AMERICAN ACADEMY OF PEDIATRICS, DR. WARREN R. SISSON, President, "in recognition of the public health significance of its notable nation-wide study on child health services and pediatric education."

THE LIFE INSURANCE MEDICAL RESEARCH FUND, M. ALBERT LINTON, Chairman, "for initiation and support of programs of research into the main cause of death, cardiovascular disease."

The beautifully illuminated citations read as follows:

Dr. Haven Emerson

Most recipients of high honors must accumulate the services of a lifetime in order to earn their reward. In Haven Emerson, however, we deal with a figure so unique that one episode alone out of a life of exceptionally distinguished service suffices to justify our appreciation.

During the last decade Dr. Emerson has demonstrated the power of an idea whose time has come. Although local health service under municipal government goes back at least 75 years, and though more than 40 years have passed since the founding of the first full-time rural health unit in the United States, there remains about one-third of our population and even larger part of our land area without even the rudiments of an organized health service.

Since 1942 Dr. Emerson in almost single-handed devotion has undertaken the task of solving this problem by overcoming public and professional complaisance with the status quo and thereby extending sound governmental programs for health to every part of the United States.

Studies directed by Dr. Emerson for the Committee on Administrative Practice have put on record for the first time the minimum basic services and the principles which should prevail in every community. The acceptance this report has received from organized medicine, from the various professions concerned, from voluntary health agencies and from Federal Government has been unprecedented.

A standard reference work, *Local Health Units for the Nation*, published in 1945, has become the pattern for public health planning in nearly every state. The influence and prestige of this movement are the more notable because the report has never had official status, yet cannot be ignored by any responsible health administrator today. The sheer perfection of the plan for the ends desired is the basis of its popularity and usefulness.

The record shows that Dr. Emerson, with the backing of the American Public Health Association and of the National Health Council, has planned notable conferences held for state health authorities at the University of Michigan and for national civic groups at Princeton which, in turn, led to the creation of a committee representing fifty national civic agencies which has brought overwhelming influence to bear. A series of conferences has been held, each representing several states, to broaden the base of citizen understanding and to facilitate the permissive legislation required.

To have made such an impress upon a public matter touching so intimately the health and well-being of every citizen would be a worthy achievement for any man's lifetime. Yet Dr. Emerson has undertaken this crusade and brought it far on the road to completion as one chapter in a long and distinguished life, full of honors and of achievement.

The Special Award is presented to Dr. Emerson in recognition of this part of his inspiring career because it promises to influence favorably the health and the lives of all Americans, and to provide the framework not only for the special services now recognized as essential to our civic health, but also for extensions into other fields which may open before us in the future.

Dr. Andre Cournand

To Andre Cournand a Lasker Award for 1949 is made for his original, constructive, and comprehensive research in the field of human pulmonary physiology, extending over a period of nearly twenty years; for his courageous application of the technique of catheterization of the heart to the study of cardiovascular blood pressures and blood flow; for his investigation, by these techniques, of the dynamics of circulatory failure in traumatic shock in man, and the effects of treatment in this condition; for his brilliant and profoundly significant contributions to the physiology of the pulmonary circulation, and of the dynamics of the heart in both normal and abnormal conditions, with clarification of the aims and effects of treatment; and finally, for the inspiration of his leadership as a scientist, counsellor, and teacher, to the rising generation of men and women engaged in research in the broad field of cardiovascular physiology and cardiovascular disease.

Dr. William S. Tillett and Dr. L. R. Christensen

In the course of certain diseases or following injury, an accumulation of pus or fibrin clots frequently occurs which may seriously delay or prevent healing. Up to the present, the treatment of such conditions has been by surgical evacuation, which often included major plastic operations for repair. Through the distinguished collaborative investigations of Dr. William S. Tillett and Dr. L. R. Christensen at New York University College of Medicine, "streptococcal enzymatic debridement" has been discovered and developed as a new therapeutic principle of important clinical sig-

nificance. In addition, our knowledge of the nature of a protein-digesting enzyme of human blood has been placed on a new basis and information gained on the composition of pus which changes previous concepts.

Dr. Tillett, an original and profound student of both the clinical and laboratory aspects of infectious disease, discovered in 1933 that hemolytic streptococci produce an enzyme, fibrinolysin, now known as streptokinase, a substance which dissolves human fibrin clots. Twelve years later, Dr. Christensen, a microbiologist, with a strong biochemical bent, demonstrated, after a characteristically penetrating and persistent investigation, that streptokinase functions by activation of another protein-digesting enzyme present in blood plasma, but usually in an inactive state. He also described a method of purifying streptokinase which permitted its successful use in patients.

In the course of clinical studies on the liquefaction of fibrinous and purulent exudates, it was recognized for the first time that the viscous character of pus is due in great part to desoxyribose nucleoprotein; moreover, it was found that the streptokinase preparations contained an enzyme, streptococcal desoxyribonuclease (streptodornase) which, through its digestive action on nucleoprotein, causes thick pus to become thin and watery and thereby facilitates its removal. Methods for purifying this enzyme have also been developed by these investigators.

This demonstration of the mode of action and clinical effectiveness of streptokinase and streptodornase is a brilliant contribution to the treatment of human diseases in which accumulated fibrin or pus impedes healing or delays it indefinitely. It is not an exaggeration to state that the principles involved in the clinical use of these streptococcal products stand out as a therapeutic landmark. In recognition of these important contributions to the advancement of medicine, the American Public Health Association presents a Lasker Award for 1949 jointly to Dr. William S. Tillett and Dr. L. R. Christensen.

MARION W. SHEAHAN, R.N.

The American Public Health Association pays tribute to a rare blend of talents in the person of Miss Marion W. Sheahan. Nursing service, the field of public health, and particularly public health nursing, have assumed a new and broader stature because of Miss Sheahan's inspiring leadership, skills and unswerving devotion to her "visions of a better world."

Her creative thinking helped to mold the plans which enabled nursing to play its proper role throughout World War II in health protection on the home front and mobilization of nursing personnel for the Armed Services.

Miss Sheahan was chairman of the National Nursing Planning Committee which formulated A Comprehensive Program for Nation-wide Action in the Field of Nursing. This became the blueprint which initiated and will guide progress in nursing for many years to come.

As Director of Public Health Nursing in New York State, she pioneered new methods that set the patterns for her own and many other States.

With ability and courage to reach difficult goals, Miss Sheahan has forged a record of superb achievement by her accomplishments.

DR. MAX THEILER

Dr. Max Theiler discovered in 1930 that white mice are susceptible to yellow fever virus inoculated intra-cerebrally and that serial intra-cerebral passage of the virus in this host produces a loss of virulence for monkeys.

This observation revealed for the first time the possibility of protecting exposed human beings against attacks of this dread disease. It led almost at once to a method of human vaccination against yellow fever which is still extensively used. Further work by Dr. Theiler, in 1936 and 1937, resulted in the production of a more profound modification of the virus by means of prolonged maintenance in tissue cultures. This strain of virus, known as 17D, has been made the basis of another effective vaccine utilized for the protection of millions of human beings against yellow fever in various parts of the world. Men and women in African and South American Jungles would be grateful to Dr. Theiler if they realized their debt to him.

The American Public Health Association belatedly recognizes this debt with deep appreciation by a Lasker Award to Dr. Theiler for these outstanding scientific contributions to human health and welfare.

DR. EDWARD C. KENDALL AND DR. PHILIP HENCH

After isolating thyroxine from the thyroid gland in 1914 and glutathione from yeast in 1939, Dr. Kendall turned his attention to the chemistry of the hormones of the adrenal glands. Since 1932, Dr. Kendall has achieved a rare measure of success in the isolation of active steroids from the adrenal cortex, including Compounds A, E, and F. The chemical isolation of these substances made it possible for Dr. Kendall and his collaborators, as well as investigators throughout the world, to study their physiological action. Dr. Kendall's

chemical studies have also aided immeasurably in the recent large-scale synthesis of Compounds A and E.

Dr. Philip Hench, a physician with a long and deep interest in rheumatic disorders, had on clinical grounds come to believe that an inadequate supply of certain adrenal steroids might constitute a fundamental disturbance in rheumatoid arthritis and allied disorders. In closest association with Dr. Kendall, Dr. Hench systematically tested the effects of various adrenal hormones as they became available for clinical trial. These studies culminated in the demonstration of the almost miraculous therapeutic effect of Compound E, now termed Cortisone, in the management of rheumatic disorders.

For these valuable contributions to human biology and the therapy of one of the commonest diseases of mankind, the American Public Health Association presents a Lasker Award for outstanding scientific achievement to these distinguished investigators.

THE LIFE INSURANCE MEDICAL RESEARCH FUND, M. ALBERT LINTON, CHAIRMAN

The Life Insurance Medical Research Fund was established in 1945 by the cooperative participation of most of the important life insurance companies of the United States and Canada for the purpose of making grants in support of medical research, the results of which might be expected to reduce mortality and improve longevity. Under the able chairmanship of M. Albert Linton, the Fund initiated a program of aiding research on cardiovascular disease at a time when financial support for research in this field was very limited.

From its inception the Fund, in recognition of the well-established principle that research in the basic medical sciences often and sometimes unexpectedly provides the knowledge essential for the development of methods for the prevention or cure of disease, wisely adopted the policy of placing major emphasis on support of fundamental research.

It is already apparent that the activities of the Fund not only have served to focus attention on the need for cardiovascular research but also through its grants and fellowship program have given a great impetus to research in both the experimental and clinical fields.

Of perhaps even greater importance than its direct financial contributions to the solution of problems of cardiovascular disease, the Fund has set a pattern for the cooperative support of medical research by private agencies which possess fundamental social significance for the public health and may well serve as an example for the establishment of similar undertakings by other private and quasi-public agencies. In recognition of these constructive contributions to the advancement of medical science and public health, the American Public Health Association presents a group award for 1949 to the Life Insurance Medical Research Fund for outstanding public service.

THE AMERICAN ACADEMY OF PEDIATRICS, DR. WARREN SISSON, PRESIDENT

The American Academy of Pediatrics has concerned itself for more than eighteen years with securing better and more evenly distributed health services for the children of this country.

In line with its purpose to make medical care of high quality available to all mothers and children, regardless of race, creed, or economic circumstances, this distinguished national body of pediatricians initiated a comprehensive nation-wide study of child health services and of pediatric education in 1945 with the active participation and support of the United States Children's Bureau and the Public Health Service.

The study covered every state and county in the Nation during the course of three years. Its detailed findings, recently published by the Commonwealth Fund under the title, "Child Health Services and Pediatric Education," clearly reveal the inadequacies of professional personnel and facilities peculiar to each state, which are dependent upon the nature of its population, its geography, and its economic status. These revelations also point the way to methods for early correction of the deficiencies, if the people of our country and the legislators can be made to realize their full significance.

In appreciation of this outstanding service to the mothers and children of our country, the American Public Health Association has selected the American Academy of Pediatrics as the recipient of its 1949 Lasker Group Award for meritorious achievement in the field of public health.

The Association is particularly gratified that an Award this year goes to a national medical society composed of physicians engaged in clinical pediatrics and in pediatric education and research.

By its great accomplishment, the American Academy of Pediatrics has emphasized the dedication of the pediatricians of this country to unselfish public service. At the same time it has demonstrated that a national medical society motivated by these ideals can work in close association with our federal agencies in a spirit of mutual confidence and helpful collaboration.

ASSOCIATION NEWS

OFFICERS, 1949–1950

President—Lowell J. Reed, Ph.D., Baltimore, Md.
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Chairman of Executive Board—Hugh R. Leavell, M.D., Boston, Mass.
New Members of Executive Board—
Hugh R. Leavell, M.D., Boston, Mass.
Charles G. King, Ph.D., New York, N. Y.

Lowell J. Reed, Ph.D., President of the American Public Health Association

Lowell J. Reed, Ph.D., of Baltimore, Md., Vice-President of Johns Hopkins University and Hospital, assumed the Presidency of the Association at the close of the 77th Annual Meeting in New York City on October 28, having served as President-Elect since 1948.

Dr. Reed, who is a native of New Hampshire, was graduated from the University of Maine in 1907, and received a Master of Science degree from the same institution in 1912 and the Ph.D. degree from the University of Pennsylvania in 1915.

Dr. Reed's academic positions have been continuous since 1907, with instructorships at the University of Maine, the University of Pennsylvania, and a period of service as Assistant Professor at the University of Maine. During World War I he served as Director of the Bureau of Tabulation and Statistics for the War Trade Board.

With the establishment of the School of Hygiene and Public Health at Johns Hopkins University, Baltimore, Dr. Reed in 1918 became Associate Professor of Biometry and Vital Statistics, which post he continued until 1925. In that year he was made Professor and he has served as Dean and Director of the School, 1937–1946, and as Vice-President of the University in charge of medical affairs during the most recent

Lowell J. Reed, Ph.D.

three year period. His new position as Vice-President of the Johns Hopkins University and Hospital was only recently announced in connection with a reorganization of the medical units at the Hopkins.

Dr. Reed joined the American Public Health Association in 1925 and was elected a Fellow of the Vital Statistics Section in 1928. He has been actively identified with the American Statistical Association, the American Association for the Advancement of Science, the American Mathematics Society, the Mathematics Association of America, the International Union for Scientific Investigation of Population Problems, and the Population Association of America. Dr. Reed is an Associate Fellow of the American Medical Association. For many years he has served as a member of the Technical Board of the Milbank Memorial Fund, New York, and of the Board of Scientific Directors of the Rockefeller Foundation, New York. He is a member of Phi Beta Kappa, Sigma Xi, Delta Omega, and Phi Kappa Sigma.

In addition to his work as a teacher, Dr. Reed has made many contributions to scientific literature and is particularly well known as consultant on medical and public health education. He recently served as a special Congressional referee in connection with the development of a bill for federal aid to medical, public health, engineering, dental, and nursing education.

SEDGWICK MEMORIAL MEDAL TO DR. VAUGHAN FOR 1949

THE Sedgwick Memorial Medal was presented on behalf of the Association on October 27, 1949, by Abel Wolman, Dr.Eng., of Johns Hopkins University, Baltimore, Chairman of the Sedgwick Memorial Committee, to Henry F. Vaughan, Dr.P.H. In his presentation, Dr. Wolman gave the following citation:

"The American Public Health Association delights to honor Dr. Henry F. Vaughan with the bestowal of the Sedgwick Memorial Medal for distinguished service in public health.

"This award to Dr. Vaughan represents the nineteenth time this Medal has been presented since 1929. The names of those honored in the last two decades reflect the variety of achievement which has been recognized as meriting such high distinction in public health. There have been public administrators like Chapin, Haven Emerson, and Thomas Parran; research scientists like Theobald Smith, George W. McCoy, William H. Park, Milton J. Rosenau, Hans Zinsser, and Karl F. Meyer. There have been great teachers like Frost and Winslow; and distinguished servants of the common good in related fields.

"Henry Vaughan's record is a constellation of brilliant achievements. Best known to an earlier generation as the Health Officer of Detroit for almost twenty-five years, Dr. Vaughan built

HENRY F. VAUGHAN, DR.P.H.

there a Department of Health of world-wide fame, noted for its aggressive and imaginative approach to the really important aspects of health, as well as for the teamwork of his specially able staff associates. His record in Detroit was marked in particular by his productive relationships with physicians. Here a pattern was set which has influenced scores of other health departments across the land and overseas.

"Since 1941 Dr. Vaughan has been Dean of the School of Public Health at the University of Michigan. In this capacity his creative talents have continued to assert themselves. He has assembled an excellent faculty and has offered a course closely related to the practical aspects of modern public health. Beyond the classroom work Dr. Vaughan has developed a unique series of institutes to which have come hundreds of practising health workers for truly refreshing experience. The organization of these conferences has utilized the best features of group dynamic technics and has set standards for graduate education that place Michigan among the forefront of universities linked with practical programs.

"Dr. Vaughan, who was never a man to be fenced in with accepted conventions, has organized the National Sanitation Foundation which represents cooperation between a university and the leading industries concerned with products on which the maintenance of the public health depends. He has been a leading influence in the developing program of the W. K. Kellogg Foundation. His service to Detroit has been rounded out with sustained help to the State of Michigan as a member of the Public Health Council.

"The American Public Health Association has had an opportunity at first hand to enjoy the statesmanlike leadership of Dr. Vaughan, and in making this award there is a sense of special pride in this public recognition of his achievements long known to the officers and boards of this professional society.

"Dr. Vaughan became a member of the American Public Health Association in 1914 and was elected a Charter Fellow in 1922. He became a Life Member in 1929. He was Vice-President of the Association in 1923 and President in 1925. He has served six terms as an Elective Member of the Governing Council, beginning in 1916. He has been a member of the Executive Board of the Association during nine years. He was Editor of the *American Journal of Public Health*, 1922–1924. He served as Vice-Chairman of the Health Officers Section in 1921 and for nine years was a member of the Council of the Section and for two years Chairman of the Association Committee on Fellowship and Membership. He was for nine years Chairman of the Committee on Constitution and By-Laws. For many years since 1924 he has been a member of the Committee on Administrative Practice, of which he served as Chairman in 1942 and 1943. He is now a Consultant of the Committee.

"In many respects Dr. Vaughan's career has represented the flowering of an idea which guided William T. Sedgwick in training young men to be health administrators. Sedgwick believed that sound grounding in the pre-clinical sciences was essential, but that the possession of an M.D. degree was not obligatory for health officers. For almost twenty-five years in Detroit Dr. Vaughan demonstrated how well a department might be operated with competent medically trained persons in various bureau positions under a commissioner of health whose background was engineering and sanitation.

"Dr. Vaughan is a native of Ann Arbor where he now lives, the son of Dr. Victor C. Vaughan and Dora Taylor Vaughan. He received his baccalaureate degree from the University of Michigan in 1912, followed by a Master of Science

in 1913 and the Doctorate in Public Health in 1916. Dr. Vaughan practised sanitary engineering and public health, 1913–1917 and was an Associate Professor of Public Health at Wayne University, Detroit, 1915–1937, following which he was Professor, 1937–1941. He was Commissioner of Health of the City of Detroit, 1918–1941 and has been identified with public health teaching at the University of Michigan since 1922. Since 1941 he has been Professor of Public Health and Dean of the School of Public Health at Ann Arbor.

"Dr. Vaughan, the American Public Health Association honors itself in awarding to you this Medal commemorating the services of William Thompson Sedgwick as a symbol of our recognition of your own distinguished achievement in public health."

Dr. Vaughan, in accepting the Award, made the following response:

"In accepting this priceless award I am not unmindful of the great honor which has been conferred upon me, and through this means upon my associates of the past many years. I feel extremely humble in accepting even momentarily the enduring symbol which keeps alive the spirit of William T. Sedgwick. This beloved teacher, recognized for such distinctive contributions to the progress of human biology and the training of men of science, possessed unusual power for discerning professional relationships. We are only now gradually cementing the various disciplines of the health specialties into a modern pattern and basic structure which represents the fulfillment of his ideals so aptly expressed nearly half a century ago.

"Professor Sedgwick joined our Association in 1902 and, at the Annual Meeting held at New Orleans that same year, as Chairman of the Committee on the Teaching of Hygiene, he emphasized the need of including as members of the health department staff full-time physicians trained and steeped in the science and experience of public health practice, and he also stressed the part that the bacteriologist and sanitary engineer should play in performing necessary investigations into the field of environmental health, serving as advisers and coworkers to the medical officer.

"Three years later at our thirty-third annual meeting held in Boston, in discussing the readjustment of education and research in hygiene and sanitation, he emphasized as a fundamental need the establishment of permanent, well paid positions in the health services. He declared as his belief that we should never cease for an instant to proclaim the necessity for well trained career personnel to man the health agencies. Then, typifying his staunch belief that public health would succeed only in the hands of men and women unshackled from the heritage of political tradition and domination, he prophesied the currently accepted practices in preparing individuals in sanitary biology, sanitation, epidemiology, and public health statistics and then qualified these suggestions with the statement that the health director must be a man who possesses tact, courage, and firmness.

"Thus today on the eve of noteworthy expansion in our training programs with the aid of our federal, state, and local health departments in providing funds for personnel training and encouragement for young men and women about to enter public health career work, we begin to see a realization of the prophetic delineation so forcibly outlined by Sedgwick many years ago. And again with the fulfillment of a plan to extend and strengthen effectively local health services throughout America, we are about to witness the accomplishment of proposals made by this beloved educator and public health statesman in 1905.

"And so we pause each year in the midst of our scientific and educational

conferences at the Annual Meeting of the American Public Health Association to pay honor to William T. Sedgwick as a man of far-reaching discernment and to take stock among ourselves as to the progress we are making in the fulfillment of the ideology of one who labored efficiently and effectively in promoting and conserving human health and welfare. The human race will always be the richer for his power of visualizing the health problems of his day and of the future. Untold millions will benefit by his contributions and those of his disciples to the progress of education and to the establishment and maintenance of adequate full-time community health services."

ACTIVITIES OF THE VOCATIONAL COUNSELING AND PLACEMENT SERVICE

The Association's Vocational Counseling and Placement Service, under the direction of Dr. F. W. Racker, again operated a booth among the scientific exhibits at the A.P.H.A. Annual Meeting in New York City. As in previous years there was considerable interest in the services offered on the part of employers, candidates, and of newcomers who wished to obtain information on public health careers. The Nurse Counseling and Placement Office of the New York State Employment Service occupied the adjoining booth. This was an expedient arrangement since the Vocational Counseling and Placement Service does not undertake to register nurses, believing that this function is best handled by specialized agencies such as the Nurse Counseling and Placement Office.

At the 76th Annual meeting in Boston, 75 employers and 33 candidates for positions were interviewed (excluding nurses). In the same occupational groups the ratio of employers to candidates was practically reversed this year with 37 employers and 69 candidates interviewed. The increase in candidates was most striking in the health education, sanitarian, and laboratory groups.

Year-to-year changes in the register of the Vocational Counseling and Placement Service permit some conclusions on the changing supply and demand in the various occupational groups. In September, 1949, a letter was sent to all employers on the active register inquiring which of the openings registered during the past year, and not reported as filled, still remained open. A crude analysis of the replies revealed the following interesting results: only 18 per cent of the medical openings had been filled as against 51 per cent of the engineering, 42 per cent of the sanitarian, 57 per cent of the laboratory and 60 per cent of the health education openings. These figures indicate that the personnel shortage is most striking in the medical group of positions, openings in the other job categories being filled with less difficulty (not taking into account the nursing group). Recent discussions with a number of public health employers confirmed the impression that it has become easier than in the past few years to fill the lower grades of laboratory, engineering, and sanitarian openings but that it is still very difficult to find suitable candidates for medical openings and for some of the higher grades of openings in other professional groups.

The candidates on the register also had received follow-up letters prior to the Annual Meeting. Their replies revealed that only 10 per cent are unemployed while the remaining 90 per cent are currently employed but are interested in better opportunities. The ratio of openings to candidates on the register over the past four years has been rather consistently 4:1 (10 to 1 for the medical group).

These findings clearly point to the need for active recruitment of new workers into the public health field, especially to those professional groups in which the greatest shortage of trained personnel exists.

NEW PROJECTS, OFFICERS AND STAFF FOR THE COMMITTEE ON CHILD HEALTH

The Association Committee on Child Health was established in 1947 while Dr. Martha Eliot was President of the Association (see *A.J.P.H.*, Feb., 1948, p. 295). Dr. Leona Baumgartner, the Committee's first Chairman, resigned last summer when she was appointed Associate Chief of the Children's Bureau. Dr. Samuel M. Wishik, Director, Bureau of Child Health, New York City Department of Health, succeeded Dr. Baumgartner as chairman of the committee. Dr. Franziska W. Racker of the Association staff has immediate administrative responsibility for the activities of the committee in the central office in close coöperation with the chairman and under the direction of the Executive Secretary.

One of the contributions which this committee has already been able to make has been the establishment of a successful liaison on problems of mutual concern with the Committee for the Improvement of Child Health of the American Academy of Pediatrics (see *A.J.P.H.*, Aug. 1949, p. 1078). One area of particular interest to both groups is the training of physicians in well child supervision.

The committee's major project and interest at the present time is to collect, review, and classify standards and recommended practices in public health programs in the field of child health, and to make these "codified standards" available to workers in the field.

With the financial aid of the New York Fund for Children, staff time for administrative and research activities has been made available for this project. On September 1, 1949, Dr. Barbara M. Korsch was appointed Research Associate of the Committee on Child Health. Dr. Korsch is a pediatrician who is at present dividing her time between the Committee on Child Health and the New York City Department of Health. She received her medical degree at Johns Hopkins Medical School in 1944, served a rotating internship and assistant residencies in pediatrics and medicine in New York City and Cooperstown, N. Y. She is particularly well trained in the field of growth and development and emotional problems of children, having been a Public Health Service Research Fellow at the Institute of Child Development of New York Hospital and a Pediatric Consultant at the Menninger Clinic at Topeka, Kan.

BARBARA M. KORSCH, M.D.

JOURNALS WANTED

The Association will appreciate it if members who can spare copies of the March, April, June, and October, 1949, issues of the *Journal*, will send them collect, addressed as follows: Circulation Department, American Public Health Association, 1790 Broadway, New York 19.

APPLICANTS FOR MEMBERSHIP

The following individuals have applied for membership in the Association. They have requested affiliation with the sections indicated.

Health Officers Section

John T. Gentry, M.D., 412 Rogers Bldg., Glen Falls, N. Y., Apprentice Epidemiologist, New York State Dept. of Health

Eleanor B. Gutman, M.D., Coos County Health Dept., Coquille, Ore., County Health Officer

Lt. Col. John R. Hall, Jr., M.C., Armed Forces Staff College, Norfolk 11, Va., Medical Officer, United States Army

Comdr. Matthew J. Hantover, M.C., U. S. Naval Air Station, c/o BOQ, Alameda, Calif., United States Navy, Commander

Jacob Hurowitz, M.D., 100 Post Ave., New York 34, N. Y., Physician-in-charge, Washington Heights Social Hygiene Clinic, New York City Dept. of Health

Henry W. Kassel, M.D., Window Rock, Ariz., Chief Medical Officer, Navajo Service, P.H.S., F.S.A.

William J. Kennard, M.D., 1312 24th St., South, Arlington, Va., Chief, Aviation Medical Division, Office of the Surgeon General, U. S. Air Force

Pao-Zan King, M.D., M.P.H., 405 E. 42nd St., New York 17, N. Y., Medical Advisor, United Nations International Children's Emergency Fund

Alphege Landreville, Health Dept., New Bedford, Mass., Agent

George R. Landy, M.D., Sanilac County Dept. of Health, Sandusky, Mich., Medical Director

William A. Loori, M.D., 549 Pavonia Ave., Jersey City, N. J., Attending Physician, St. Joseph's School for the Blind

Harold J. Magnuson, M.D., M.P.H., Box 687, Chapel Hill, N. C., Senior Surgeon, Syphilis Experimental Laboratory, F.S.A., P.H.S.

I. J. Markel, M.D., 215 W. Franklin St., Elkhart, Ind., Health Commissioner, City of Elkhart

Thelma S. Miner, M.D., D.P.H., Provincial Health Dept., Assiniboia, Sask., Canada, Regional Medical Health Officer

G. Wayne Powell, M.D., 2334 Bancroft Way, Berkeley 4, Calif., Student, School of Public Health, Univ. of California

Philip C. Risser, M.D., Olympic Health Dist., Port Angeles, Wash., District Health Officer

James H. Stewart, M.D., Polk County Health Dept., Dallas, Ore., County Health Officer

Laboratory Section

Richard C. Arnold, M.D., U. S. Marine Hospital, V. D. Research, Laboratory, Staten Island 4, N. Y., Director

Betty A. Bachman, M.A., Parton Hall, Smith College, Northampton, Mass., Instructor in Bacteriology

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Helen MacLean, 212 S. Ashland Blvd., Chicago 7, Ill., Bacteriologist, Michael Reese Hospital

Sister Mary Zdzislawa Mincinska, Mother Frances Hospital, Tyler, Tex., Medical Technologist (General Laboratory)

Jean Naylor, A.B., 715 40th St., Oakland 9, Calif., Assoc. in the School of Public Health, Univ. of California

Martha K. Ward, D.Sc., 5037 Blair Circle, Chamblee, Ga., Bacteriologist - in - charge, Special Bacteriology Unit, Communicable Disease Center

Statistics Section

Madeline L. Brown, R.R.L., 2811 Mills Ave., N.E., Washington, D. C., Chief Librarian, New George Washington University Hospital

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Mabel Reid, A.M., 165-17 Highland Ave., Jamaica 3, N. Y., Consultant on Records and Statistics, Visiting Nurse Service of New York

Virginia Watson, A.R.C., National Blood Program, Washington 9, D. C., Research Analyst on the National Blood Program Staff, American Red Cross

Engineering Section

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Byron Wham, A.B., 421 Calhoun Office Bldg., Columbia, S. C., Supervisor of Physical Restoration, Div. of Vocational Rehabilitation, State Dept. of Education

Unaffiliated

Donald J. Evans, D.O., 1434 W. McNichols Road, Detroit, Mich., Practising Osteopathic Physician

Dorothy R. Granoff, M.D., 327 Whalley Ave., New Haven, Conn., Student, Yale Univ., School of Public Health

Richard H. Mattox, B.A., 17 Maple Ave., Slingerlands, N. Y., Personnel Officer, New York State Dept. of Health

A. Torab Mehra, M.D., M.P.H., Shahreza Ave., opposite Ramsar, Tehran, Iran, Medical Director, The Iran Foundation, Inc.

J. Teague Self, Ph.D., Dept. of Zoological Sciences, Univ. of Oklahoma, Norman, Okla., Professor of Zoölogical Sciences

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FLORIDA PUBLIC HEALTH ASSOCIATION

Delegates, approximately 500 of them, to the 21st annual convention of the Florida Public Health Association held October 6 to 8 in West Palm Beach agree that it was the most successful one ever held.

Not only did the convention break attendance records, but it marked the first time that a woman, Ruth E. Mettinger, was seated as president of F.P.H.A. Miss Mettinger is director of nursing for the State Board of Health, a position she has held since 1934.

Named to serve on the slate with her were: Robert G. Carter, State Improvement Commission, first vice president; Mrs. Malcolm Smith, director, Florida Cancer Society, second vice president. Returned to office were Fred Ragland, finance officer and Miss Elsie Hyatt, also of the State Board of Health, as secretary and treasurer, respectively.

The Association went on record as urging "continued active opposition to any move for the consolidation of health and welfare administration in this country."

MINNESOTA PUBLIC HEALTH CONFERENCE

The new officers of the Minnesota Public Health Conference elected at the Third Annual Meeting held in Minneapolis on September 30 are:

President: F. W. Behmler, M.D., Morris

1st Vice-President: V. O. Wilson, M.D., Rochester

2nd Vice-President: E. A. Meyerding, M.D., St. Paul

Treasurer: C. G. Sheppard, M.D., Hutchinson

Executive Secretary: Dean S. Fleming, M.D., Minneapolis

Herbert Bosch was elected to represent the Conference on the Governing Council of the A.P.H.A.

A.P.H.A. membership application blank on page XXVII

EMPLOYMENT SERVICE

The following pages present information for those seeking qualified public health personnel and for those seeking positions in public health.

This is a service of the Association conducted without expense to the employer or employee.

POSITIONS AVAILABLE

Health Officers—Two, in well established, full-time health districts. Three years' experience and a year of graduate training in public health desired. Salary range of $8,280–$10,080 plus traveling expenses. Dr. J. A. Kahl, State Director of Health, 1412 Smith Tower, Seattle, Wash.

Bacteriologist, male, Ph.D., or M.D., interested in viruses or immunology for an instructorship or assistant professorship in a midwestern medical college. Salary $4,000–$6,000 plus insurance plan. Teaching load light and excellent facilities for research. **Box A-73**, Employment Service, A.P.H.A.

Bacteriologist—training and some experience in industrial microbiology to assist in planning and execution of research and field projects in canning industry. Aptitude in analyzing and reporting experimental data essential. Eastern location. Salary open. **Box A-74**, Employment Service, A.P.H.A.

Dentists—half-time and full-time positions in the Cincinnati School Dental Clinics. Salaries up to $4,754. Vacation and sick leave with pay; retirement benefits; Ohio license required. Dr. E. H. Jones, D.D.S., Oral Hygiene Services, 4th and Ludlow, Cincinnati, Ohio.

Physician (male) as Medical Director and Deputy Health Officer. Experience in venereal disease control desirable, not essential. Charge of communicable disease and city school health control. Salary $7,290–$8,000, transportation allowance; annual sick leave and retirement benefits. Medical license in Michigan or reciprocal registration. Secretary, Personnel Advisory Board, City Hall, Saginaw, Mich.

Director of Public Health Nursing with academic degree, major in public health nursing and experience in supervision; generalized program in urban area of 76,000 near Milwaukee and Chicago. Nursing staff of 14; Full-time medical director; 42 hour week. Beginning salary $3,444. Transportation furnished. Commissioner of Health, 730 Washington Ave., Racine, Wis.

Sanitary Engineer or Sanitarian with Bachelor's degree and at least three years' experience in health departments mostly at local level. Survey work with National health agency involving extensive travel, East of Rockies. **Box A-75**, Employment Service, A.P.H.A.

Public Health Engineers, Grades I to IV. Beginning salaries $3,300–$4,500. Duties pertain to water supplies, sewerage, stream pollution control and general sanitation. District and central office vacancies. Merit System Director, 809 Insurance Exchange Building, Des Moines 9, Ia.

Public Health Nurse, Educational Director, Dade County Health Department, population 405,000, urban and rural. General service including school health program. Fifty-one public health nurses on staff; five day week, sick leave, vacation, retirement plan. Beginning salary $3,300, 7½¢ mileage. B.S. degree with major in public health, adequate field and supervisory experience. Dr. T. E. Cato, Health Commissioner, 800 Court House, Miami, Fla.

Three qualified Public Health Nurses for County Health Department 35 miles from San Francisco. Generalized program, urban and rural. Salary $3,276–$3,660 plus $600 car allowance. Director of Nursing, Vallejo-Solano County Department of Public Health, 228 Broadway, Vallejo, Calif.

Bacteriologist—strong background in bacteriology and immunology, preferably Ph.D., with broad knowledge of biologicals, antibiotics and germicides. Commercial laboratory experience desirable but not essential. Supervisory ability and knowledge of official regulations desirable. Submit qualifications, salary requirements and photograph to Employment Department, Eli Lilly and Company, Indianapolis, Ind.

Health Officer for Waterbury, Conn. Salary $8,300, monthly allowance $35 for transportation. Edward W. Kirschbaum, M.D., Acting Health Officer, Department of Public Health, Waterbury, Conn.

Assistant Health Officer. Opportunity for young physician in large county; generalized program with emphasis on school

health services. Previous experience and training desirable but not essential. Salary $7,000–$7,500 plus car allowance and official expenses. **Box A-76**, Employment Service, A.P.H.A.

Public Health Staff Nurses; generalized nursing service; population approximately 63,000 rural community. Salary range $280–$300. Transportation provided. P.H.N. certificate and experience preferred. Two weeks' vacation, two weeks' sick leave, forty hour week. Director of Public Health Nursing, Merced County Department of Public Health, P. O. Box 1350, Merced, Calif.

Chief Meat Inspector—Graduate veterinarian to head Division of Meat Inspection. Duties supervisory and administrative. Texas License necessary. Salary $400 per month, plus mileage. R. E. Johnson, M.D., Director, Health Unit, P. O. Box 49, Corpus Christi, Tex.

POSITIONS WANTED

Bacteriologist, Ph.D. (woman). Many years' experience, desires position as supervisor in medical bacteriology or teaching, East. **Box LD-6**, Employment Service, A.P.H.A.

Public Health Educator, B.A. and postgraduate study in Public Health and Preventive Medicine. Washington, Oregon or California preferred. Box **HE-19**, Employment Service, A.P.H.A.

Bacteriologist—B.S., five years' experience public health bacteriology, parasitology, clinical laboratory work including medical bacteriology, chemistry, blood banking and serology. Desires position in public health laboratory or industry. **Box L-7**, Employment Service, A.P.H.A.

Health Educator, woman, A.B., M.A. degrees, experienced in administration and public relations as well as promotion and work with groups. Teaching experience in schools and college; rural and city programs of official and voluntary agencies. **Box HE-20**, Employment Service, A.P.H.A.

Announcements

Opportunities in Detroit, Michigan

The Detroit Civil Service Commission, Water Board Building, 735 Randolph Street, Detroit, Mich., announces the following opportunities:

Public Health Staff Nurses—salary $3,222–$3,582, in-training program at $2,876–$3,140. Generalized program, opportunity for academic work at university. Forty hour week, vacations and sick leave, pensions, maternity leave, death and sickness benefits, duty disability allowances. Qualifications: for staff positions, 22–30 years, must possess equivalent of public health nursing certificate; trainees, 20–25 years, must be through nurses' training, eligible to matriculate in university.

Senior Dentist—large municipal clinic. Must have license to practise in Michigan. Salary $4,062; thirty hour week, five days.

Junior and Senior Veterinarian—salary rates—Junior Veterinarian, $3,034–$4,068; Senior Veterinarian $3,591–$4,068.

Opportunities in Connecticut

The State of Connecticut, announces openings for physicians, nurses, and various openings in related institutional services. Address inquiries to: Personnel Department, Glendon A. Scoboria, Personnel Director, State Capitol, Hartford, Conn.

Physicians		*Nurses*		*Institutional Services*	
Assistant Physician	$4,800–$6,480	Charge Nurse	$2,820–$3,300	Chemist	$2,820–$3,420
Asst. Chief Surgeon	$6,780–$8,220			Head Lab. Tech.	$2,820–$3,420
Physician and Psychiatrist	$6,680–$8,220	Grad. Nurse	$2,580–$3,060	Lab. Tech.	$2,400–$2,880
Residents in Psychiatry	$2,820–$3,540	Nurse Supervisor	$3,180–$3,900	Occupational Ther.	$2,460–$3,300
Senior Physician	$6,480–$7,680	P. H. Nurse Consultant TB	$3,480–$4,380	Psy. Soc. Worker	$2,460–$3,300
Senior Physician (psychiatry)	$6,480–$7,680	TB Control Nurse	$2,760–$3,480	Psychologist	$3,000–$3,900
Intern	$2,220–$2,700	Director of Nursing Ed.	$3,780–$4,680	Sen. Psy. Soc. Wkr.	$3,120–$3,840
Chief Anesthetist	$7,020–$8,460				
Director of Clinical Laboratories	$6,780–$8,220				

Opportunities with World Health Organization

The World Health Organization is recruiting for staff positions. Persons interested should communicate with Dr. Fred L. Soper, Regional Director, World Health Organization, 2001 Connecticut Avenue, N. W., Washington 8, D. C.

Chief of Section on Environmental Sanitation

Medical Officer in charge of Biological Standardization

Medical Officer Venereal Diseases—Serologist
Research Assistant Mental Health Section—Headquarters
Medical Officer—Assistant Chief of Section on Tuberculosis
Consultant in Social and Cultural Aspects of Operational Services
Medical Officer—Venereal Diseases (Assistant Chief of Section)
Regional Adviser on Environmental Sanitation
Regional Medical Adviser on Venereal Diseases
Regional Medical Adviser on Malaria
Regional Medical Adviser on Tuberculosis

Announcement of Regular Corps Examinations U. S. Public Health Service

Position Title	*Beg. Salary*	*Deadline for Application*	*Exam. date*
Medical Officers		December 12, 1949	Jan. 9, 10, 11, 1950
Asst. Surgeon	$5,686.56		
Senior Asst. Surgeon	$6,546.00		
Pharmacists		January 23, 1950	Mar. 6, 7, 8, 1950
Junior Asst. Pharm.	$3,969.00		
Asst. Pharm.	$4,486.56		
Senior Asst. Pharm.	$5,346.00		
Physiologists		January 2, 1950	Feb. 6, 7, 8, 1950
Assistant	$4,486.56		
Senior Assistant	$5,346.00		
Psychologists		February 20, 1950	Mar. 20, 21, 22, 1950
Assistant	$4,486.56		
Senior Assistant	$5,346.00		

Application forms and additional information may be obtained from: Surgeon General, U. S. Public Health Service, Federal Security Agency, Washington 25, D. C. Attention: Division of Commissioned Officers.

Opportunities in Wisconsin

The following vacancies exist in the State Board of Health:

Medical Specialist I—
$6,984 (start. salary incl. bonus)
Pediatrics
Obstetrics, gyn.
Psychiatry
Tuberculosis

Medical Specialist II—
$8,064 (start. salary incl. bonus)
Tuberculosis

Public Health Physician I—
$6,984 (start. salary incl. bonus)
District Health Officer

Public Health Physician II—
$8,064 (start. salary incl. bonus)
District Health Officer
Maternal & Child Health
Epidemiology
Industrial Hygiene

The following vacancies exist in the State Department of Welfare:
Psychiatrist I—$6,984 (start. sal. incl. bonus)
Psychiatrist II—$8,064 (start. sal. incl. bonus)
Psychiatrist III—$8,544 (start. sal. incl. bonus)
For information on the above openings write to Bureau of Personnel, Madison 2, Wisc.

Exchange Placement Service of the A.A.H.P.E.R.

The American Association for Health, Physical Education and Recreation, a department of the National Education Association (1201 Sixteenth Street, N.W., Washington 6, D. C.) announces the establishment of an exchange placement service for health educators, physical educators, and recreation leaders. Referrals of possibly suitable candidates will be made to employers without any responsibility for the position or recommendations and references for the candidate. This service will be rendered without charge to the members of the A.A.H.P.E.R. There are no basic requirements for applicants. According to the A.A.H.P.E.R. openings and candidates in the fields of both community and school health education will be considered.

Advertisement

All communications should be sent to Burneice Larson, Medical Bureau, Palmolive Building, Chicago 11, Ill.

Opportunities Available

PUBLIC HEALTH PHYSICIANS FOR THE FOLLOWING: (a) Directors for maternal and child health, epidemiology, and industrial hygiene, and also several district health officers; state health department; salaries for directors dependent upon qualifications; for district health officers, $8,000. (b) Director of public health school, state university. (c) Assistant health officer; metropolitan area of East. (d) Director, university health service; student enrollment 9,000; excellent facilities; opportunity for developing efficient program. (e) County health director; county of 300,000; challenging opportunity; $8,500–$10,000; California. (f) Clinic service and administrative assisting; state health department, large city of Pacific Northwest. (g) Director, school health program; enrollment more than 12,000; winter resort town, Southwest. (h) Deputy health commissioner; one of largest counties in Michigan. **PH12-1** Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

PUBLIC HEALTH DENTISTS FOR FOLLOWING: (a) To serve as county dental health officer; around $5,000, Middle West. (b) To practise principally with children; outside Continental United States; considerable traveling. (c) To conduct dental health program, state department of health; West. (d) School dentist; mining community of southeast state; mobile unit; $6,000. **PH12-2** Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

WANTED—(a) Epidemiological research analyst to conduct community surveys and to evaluate combined control program of tuberculosis association and health department; duties include research; degree, year's postgraduate training and several years' public health experience required; large city outside Continental United States. (b) Sanitary engineer thoroughly experienced in fields of malaria and insect control; key position, South America; $7,000. (c) Sanitarian; state board of health with headquarters in university center, Middle West. **PH12-3** Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

PUBLIC HEALTH NURSES FOR FOLLOWING: (a) To direct child welfare program; orthopedic training desirable; headquarters in university town; $4,200–$4,800; Northwest. (b) Director of public health nursing; municipal health department; staff of 12 field nurses, one supervisor; town of 80,000, short distance from Chicago. (c) Director, public health nursing program; eastern university. (d) Orthopedic consultant, generalized consultant and public health nurses for county and school posts; state department of health, West. (e) To conduct health education program in tuberculosis control among Negro population; county health department, Middle West. (f) To direct generalized public health program; college town of 80,000, metropolitan area of East. (g) Field nurses, county health department, Southern California; salaries dependent upon experience. (h) Public health coördinator; fairly large hospital; Hawaii. (i) School nurse to direct health program, resort town, 15,000, Pacific Northwest. (j) Student health nurse, young women's college; living accommodations on campus; will have privilege of all campus facilities; East. (k) Executive secretary; state nurses' association; public health nursing experience desirable; considerable traveling. (l) Staff nurse; newly organized service, generalized program; Chicago area. **PH12-4** Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Opportunities Wanted

Dentist, qualified public health and children's dentistry; B.A., D.D.S., M.A., Ph.D., leading schools; year's residency, children's dentistry; teaching experience; research has been particularly concerned with administrative and educational problems in connection with children's dental programs in underdeveloped areas; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Health educator; Master's degree, Public Health, Eastern university; four years, health educator, county health department; three years, health coördinator, liberal arts college; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Public health nurse administrator; B.S. (Education); MPH; four years, consultant in public health and school nursing, metropolitan health department; past several years, director, health education program, county health department; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Physician distinguished in field of public health medicine is available; M.S., M.D., D.P.H. degrees, leading schools; enviable career of successful experience in academic and administrative public health work; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Sanitary Engineer, B.S. (Civil Engineering); year's graduate training, Harvard Graduate School of Engineering; twelve years' experience; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

Statistician; M.S., Ph.D. degrees; five years' teaching experience; past several years, director vital statistics, division city health department; for further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

NEWS FROM THE FIELD

INTER-ASSOCIATION COMMITTEE ON HEALTH

Six large national professional associations concerned with the nation's health have formed an Inter-Association Committee on Health to study and discuss methods of improving health care for the nation. The third meeting was held November 12 at the Hotel Statler, New York City, at which time the following announcement was authorized:

Participating associations are: The American Dental Association, American Hospital Association, American Medical Association, American Nurses Association, American Public Health Association, and American Public Welfare Association.

The committee will serve as a means for the exchange of information on the programs of the participating organizations to the end that a common understanding may be reached toward the solution of national health problems. The committee will carry on activities contributing to the major objectives of improving the health of the nation. The committee adopted principles of organization which are to be recommended for approval to the appointing organizations each of which is represented by three members.

Representing the American Dental Association were Dr. Philip E. Adams, President, Boston; Dr. William McGill Burns, Trustee, Brooklyn; Dr. Kenneth A. Easlick, Ann Arbor; Dr. Harold Hillenbrand, Secretary, Chicago.

Representing the American Hospital Association were: John N. Hatfield, President, Philadelphia; John H. Hayes, New York City; Dr. Charles F. Wilinsky, President-elect, Boston; George Bugbee, Executive Director, Chicago.

Representing the American Medical Association were Dr. Louis H. Bauer, Chairman, Board of Trustees, New York; Dr. E. S. Hamilton, Kankakee, Ill.; Dr. E. L. Henderson, President-elect, Louisville, Ky.; Dr. James R. Miller, Trustee, Hartford, Conn.; Dr. George F. Lull, General Manager, Chicago.

Representing the American Nurses Association were Agnes Gelinas, New York; Ruth W. Hubbard, Philadelphia; Elizabeth K. Porter, Cleveland; Ella Best, Executive Secretary, New York.

Representing the American Public Health Association were Dr. Hugh R. Leavell, Chairman, Executive Board, Boston; Dr. Lowell J. Reed, President, Baltimore; Dr. Dean A. Clark, Chairman A.P.H.A. Sub-committee on Medical Care, Boston; Dr. Reginald M. Atwater, Executive Secretary, New York.

Representing the American Public Welfare Association were Loula Dunn, Director, Chicago; Raymond M. Hilliard, Member, Board of Directors, New York; James Brindle, Chairman, Committee on Medical Care; Dr. Ellen C. Potter, Trenton, N. J.; Elizabeth Wickenden, Washington.

STATE HEALTH OFFICERS MEET

The 48th Annual Surgeon General's Conference with the State and Territorial Health Officers was held in Washington, October 18–22. The following officers were elected.

President: Wilton L. Halverson, M.D., California

Vice President: Roy L. Cleere, M.D., Colorado

Secretary-Treasurer: Leroy E. Burney, M.D., Indiana

Executive Committee: Floyd C. Beelman, M.D., Kansas; Newman H. Dyer, M.D., West Virginia; Vlado A. Getting, M.D., Massachusetts

In addressing the meeting, Oscar R. Ewing, Federal Security Administrator, expressed the opinion that the 81st Congress had displayed more interest in health measures than any Congress in history. He cited the following Congressional actions in support of this position:

1. A doubling of the annual hospital construction authorization (including health centers) to a total of $150,000,000 in federal funds and a provision for $1,200,000 for research into hospital service systems.

2. Passage by the Senate of the bill in aid of training for professional personnel, together with a favorable report from the House Committee.

3. Favorable action by the Senate on the bill for support of grants to states for local health services and approval by House Subcommittee.

4. Senate action on the school health services bill with no action in the House.

5. Legislation aimed to extend research activities of the Public Health Service, including two new research institutes, one on neurological diseases and blindness and the other on rheumatism and arthritis, supported by the Senate.

Mr. Ewing called attention to the fact that there was no affirmative action on a series of bills to extend health services for children by increasing federal grants for maternal and child health from $11,000,000 to $25,000,000 annually, and crippled children's services from $7,500,000 to $25,000,000. Nor was action taken on the proposal to add $10,000,000 to the field of child research.

In speaking to the group, Surgeon General Leonard A. Scheele recalled that in 1903 the total expenditure of the Public Health Service was $1,274,000, whereas during the current year it will be $353,499,000, including hospital construction. Dr. Scheele announced that a small unit of officers has been trained in coöperation with the Atomic Energy Commission to give advice on the control of health hazards arising from radiation-producing equipment and radioactive materials. He pointed to the need of more research in air pollution by industrial chemicals as a result of the Donora, Pa., "smog" study.

A number of resolutions were adopted by the Conference as follows:

1. Urging Congress to establish a Department of Health headed by a career physician of the U. S. Public Health Service.
2. Recommending federal grants in aid available for the establishment or strengthening of schools of public health.
3. Condemning the Truman-Ewing plan for compulsory health insurance.
4. Requesting another communicable disease conference in 1950 similar to the one conducted in Atlanta just before the current Surgeon General's Conference.
5. Approval of showing in schools and churches the films "Human Growth" and "Human Reproduction."
6. Recommending that the Service and the Children's Bureau jointly provide government support for a recruitment program proposed by the American Public Health Association. This resolution in full reads:

WHEREAS, the implementation and success of each and every public health program depends upon the availability of adequately trained and experienced personnel, and

WHEREAS, there are many vacancies in Federal, State and local health agencies, and

WHEREAS, health agencies are not able to procure the needed personnel, therefore be it

RESOLVED that the Association of State and Territorial Health Officers urge the Public Health Service and the Children's Bureau to determine forthwith the method whereby the American Public Health Association can be financially assisted by the Federal agencies concerned in their "Personnel Procurement Program," and be it further

RESOLVED that the States and Territories hereby agree to finance this project by assessment against their Federal grants-in-aid for these services, and that the Executive Committee of the Association of State and Territorial Health Officers be directed to develop with the Public Health Service and Children's Bureau a method for paying from the grants-in-aid on an agreement for service rendered basis payment directly from the Public Health Service and the Children's Bureau, Federal Security Agency.

HILL-BURTON ACT LIBERALIZED

An amendment to the Hill-Burton Hospital Construction Act, passed by the first session of the 81st Congress, increased federal grants to states for construction of hospitals and health centers from 75 to 150 million dollars annually. A new formula permits federal contribution up to two-thirds of the cost of construction of new hospitals as against a one-third ceiling of the original law, with a formula that can be weighted in favor of lower income communities. It also extends the period during which allotments may be made from June 30, 1950, to June 30, 1955. It further provides $1,200,000 annually for 5 years for a research program looking toward coördination and improvement of hospital services.

The construction program of the Hill-Burton Act is administered by the Public Health Service under direction of its Surgeon General, Leonard A. Scheele. As of October 1, 1949, 50 hospitals had been completed and were in operation, 400 were under construction, and a total of 954 projects approved. The majority

of those already completed are small general hospitals located in small towns or rural areas. An integral part of the construction program is the coördination of such small hospitals into a regional system with a fully equipped teaching and medical center at its apex. Four such regional projects are now in operation centered respectively in the Medical College of Virginia, the New England Medical Center, the Council of Rochester (N. Y.) Regional Hospitals, and University of Michigan Medical School.

CARE BOOK PROGRAM FOR PUBLIC HEALTH RECONSTRUCTION

The Cooperative for American Remittances to Europe, Inc. (CARE), a nonprofit corporation, proposes to Americans a channel through which they can provide new text and reference books in public health and other scientific fields to libraries, universities and technical schools in war depleted countries. The need for such gifts grows out of the widespread destruction of books through book burning and bombing. Throughout the war years and since no new books have come into a full half of the world. The many problems of reconstruction, combined with printing difficulties and lack of dollars, have continued to make it impossible for foreign countries to replenish their libraries with reference and text books on the scientific and technical advances made during and since the war.

Contributions for the Book Program in any amount are accepted at CARE headquarters, 20 Broad Street, New York, or in any local CARE office throughout the country.

RURAL DOCTORS FOR OHIO

The Ohio State Medical Association has established a Rural Medical Scholarship plan "to stimulate interest on the part of rural young men and women in the study of medicine, with the belief that, because of their interest in rural life, they will later establish medical practices in rural communities."

The plan is limited to residents of smaller Ohio communities. It provides annual grants of $500 to successful candidates for a period of four years, providing the candidate does acceptable academic work. One new scholarship will be awarded annually and the recipient may enroll at any approved medical school in the country.

UTAH HAS HEALTH AUDIT

The State of Utah recently sought the services of Dr. Ira V. Hiscock, New Haven, Conn., chairman of the Subcommittee on State and Local Health Administration of the A.P.H.A. Committee on Administrative Practice as a consultant. In a short but productive visit Dr. Hiscock helped the state officials and citizens define their problems clearly and establish a practical plan for early definitive action.

The Ogden (Utah) *Standard-Examiner* described the event as follows:

"Yale University's Dr. Ira V. Hiscock wrote a report about Utah's public health department that hurts. It hurts so much that like a diseased tooth something will be done about it.

"The report hurt when Dr. Hiscock said that Utahans die unnecessarily from diphtheria, intestinal and respiratory diseases and tuberculosis.

"It hurts to read that we have problems of environmental sanitation, which means that a lot of places are filthy when they should be clean and sweet.

"And it hurts when he says we do not have a reasonably adequate public health program because the state has been too cheap to pay fair salaries.

"Dr. Hiscock knows how to get under our skin in Utah where we pride ourselves on our progress in education. He wrote: 'An educated child in the graveyard is of little value to the community or the state.'

"He said a lot in a paragraph of his report as follows:

"'This is no time for complacency, vested interests, red tape or petty bickering over administrative details. Without proper steps to assure a reasonably adequate, although minimum, health program now, and such steps toward constructive long-range plans and coöperative action, the time, money, and energy devoted to agriculture, education, pub-

lic works, welfare and other governmental enterprises will not be used to the best advantage for the people of Utah.'

"We can stop the 'bickering over administrative details' by improving the state health department plan of organization so that the State Board of Health becomes solely a policy making body whose policies are carried out by the State Health Commissioner.

"Governor Lee promises action to build up the department. That is splendid. We should move quickly to carry out Dr. Hiscock's recommendation, so we don't lose any more of the good men and women in the department."

FIRST CARDIOVASCULAR MEETING

What is said to be the first national meeting of its kind, a National Conference on Cardiovascular Diseases, will be held in Washington, D. C., January 18–20, 1950. Called jointly by the American Heart Association and the National Heart Institute of the Public Health Service, the Conference will be staffed by the two agencies with John W. Ferree, M.D., Director of Public Health, American Heart Association, serving as conference director. The invited participants will represent public health, nursing, social work, hospital administration and rehabilitation, as well as the medical disciplines.

H. M. Marvin, M.D., president of the Heart Association and C. J. Van Slyke, M.D., director of the Heart Institute, in calling the Conference said "The time is ripe for the forces of research, community service, and education to close ranks in the fight against diseases of the heart and circulation. This conference, we hope, will provide the guideposts for a comprehensive and concrete program of action to correlate an all-out national attack on the heart disease problem."

COMMUNICABLE DISEASE CENTER CONFERENCE FOR STATE HEALTH OFFICERS

The state and territorial health officers of the United States were guests of the Communicable Disease Center, U. S. Public Health Service, in Atlanta, Ga., October 17 and 18 for a conference at the Fulton County Academy of Medicine.

State health officers were welcomed by Surgeon General Leonard A. Scheele on behalf of the Service, and a series of ten panels were presented by the staff of the Communicable Disease Center in coöperation with selected state health departments. The subjects of the panels included the general considerations of communicable disease control, morbidity reporting, tuberculosis, the virus diseases, amebiasis, diphtheria, rabies, brucellosis, salmonellosis, and streptococcal infections.

Opportunities were given those present to see the facilities of the Communicable Disease Center in Atlanta and at Chamblee, Ga., including the audio-visual production at Chamblee. More than 200 registrants from the state departments of health and the Public Health Service were in attendance.

COLUMBIA ACCREDITED FOR MASTER'S DEGREE IN HEALTH EDUCATION

On October 23, 1949, the Executive Board, on the recommendation of the Committee on Professional Education, accredited the Columbia School of Public Health for 1949–1950 to give Master's degrees other than the M.P.H. with specialization in public health education. This accreditation is granted to Columbia in addition to the accreditation for the M.P.H. and Dr.P.H. degrees. Altogether six of the ten accredited schools of public health are now accredited for Master's degrees other than the M.P.H. with specialization in public health education. Lists of all accredited schools together with the degrees for which they are accredited and the names of the deans or directors are available from the A.P.H.A. central office.

THE NATION'S HOSPITAL NEEDS

The Nation's Needs for Hospitals and Health Centers by Dorothy P. Rice and Louis S. Reed has just been issued by

the Division of Hospital Facilities, Public Health Service. A 159 page booklet, it summarizes the plans of states and territories for hospital survey and construction activities under the Hill-Burton program (Public Law 725, 79th Congress). It is the first analysis published of the state plans for hospital construction under this program. Chapters are devoted to background information on the law and its operation, general methods of planning for construction programs by the states and summary data on state needs for hospital beds. State maps of hospital service areas and regions and tabular statistics occupy the bulk of the report. The report is available from the Public Health Service, Division of Hospital Facilities, Washington, D. C.

1949 HEALTH OFFICER'S DIRECTORY

The 1949 Directory of Full-Time Local Health Officers of the Public Health Service is out. It has few variations from those of former years except that it no longer makes a distinction between county and city-county health departments. The summary tables show a small increase in number of counties covered, a small decrease in city departments, a small increase in single county departments, and a slightly larger increase in district units. There has been relatively little change in number of health officer vacancies, the most significant being a rise in number and ratio of health officer vacancies in single county health departments. U. S. Gov. Ptg. Office, Washington 25, D. C., 15 cents.

THE JOHN SCOTT AWARD TO DR. KING

Charles Glen King, Ph.D., scientific director of the Nutrition Foundation, New York, and professor of Chemistry at Columbia University, has received the 1949 John Scott Award of the City of Philadelphia, recognizing his "outstanding work on the chemistry of vitamin C." The Award consists of $1,000 and a medal and was presented to Dr. King at a recent meeting of the Pittsburgh section of the American Chemical Society.

Dr. King, who was recently Chairman of the Food and Nutrition Section of the A.P.H.A., is well known for his contributions to the isolation, chemical identification, and synthesis of vitamin C (ascorbic acid). He has also conducted other fundamental researches in nutrition, has studied enzymes and done work on the molecular structure of sugars and fats.

PUBLIC HEALTH WORKERS DIE IN AIRPLANE DISASTER

The collision on November 1 between two planes near the Washington, D. C., airport, described as the worst disaster in civilian aviation, took the lives of three women who had been in attendance at the 77th Annual Meeting of the American Public Health Association in New York City in the preceding days.

Mrs. Thelma Foster of New York City, Territorial Supervisor with the Metropolitan Life Insurance Company Nursing Service in the southern states from Virginia to Florida, had previously been the Director of Nursing Activities in the Nashville-Davidson County Chapter of the American Red Cross, Nashville, Tenn. She joined the staff of the Metropolitan Life Insurance Company two years ago. She had been identified with the Public Health Nursing Section of the American Public Health Association since December, 1945. She is survived by her parents, Mr. and Mrs. George W. Shaw of Missoula, Mont.

Miss Beatrice Costa, Health Educator of Rio Piedras, Puerto Rico, and Miss Olga Martinez, a nutritionist with the Bureau of Maternal and Child Hygiene, Insular Department of Health, Santurce, Puerto Rico, also lost their lives. Miss Martinez, who held a Master of Science degree from Western Reserve Univer-

sity, had been a member of the Food and Nutrition Section since 1947. She held the title of Principal Nutritionist.

LORD BOYD ORR RECEIVES NOBEL AWARD FOR WORLD PEACE

The Nobel Committee of the Norwegian Parliament has announced that the Nobel Peace Prize for 1949 has been awarded to Lord Boyd Orr of Great Britain, nutrition expert and crusader for world government. The award this year amounts to 156,290 Norwegian kroner, said to be about $21,890. The presentation is to be made in Oslo in December.

Lord Boyd Orr, who is 69 years old, was the former Director General of the United Nations Food and Agricultural Organization. Created a Baron by King George VI early in 1949, Lord Boyd Orr is better known in the United States as Sir John Boyd Orr. He is an Honorary Fellow of the American Public Health Association.

UNIVERSITY MOBILE LABORATORY

The University of Washington Medical School's department of public health and preventive medicine has a mobile laboratory which can be rushed to any part of the state for epidemic control or for use in field research. It was used first in the Yakima valley for a follow-up research study of encephalitis which began August 1. The research was a joint investigation of the Medical School, the Washington State Department of Health, the Hooper Foundation and the University of California Medical School. Materials collected will be studied in detail later at the medical school. The laboratory is reportedly one of the few of its kind in the nation.

A SEWER ORDINANCE MANUAL

The 44 page manual of practice, *Municipal Sewer Ordinances*, is the third of the series of special manuals by the Federation of Sewage Works Associations. It was prepared by the Sewage Works Practice Subcommittee on Municipal Sewer Ordinances, of which Don E. Bloodgood is chairman.

Discussed are the consequences of inadequate control of the use of public sewers and various types of regulations as set forth in a large number of prevailing ordinances. Also considered are policies and recommended practices relating to the admission of industrial wastes into public sewers for treatment and disposal by the municipality. A procedure for evaluating and handling such wastes is presented, with a discussion of limiting values for objectionable characteristics. A "model" form of ordinance, with suggested permit forms, is included to illustrate application of the basic principles of good practice. Federation of Sewage Works Associations, 325 Illinois Building, Champaign, Ill., $1.00.

COURSE ON VIRUS RESEARCH

The Department of Microbiology of New York University College of Medicine will give an intensive ten week course in the theories and techniques of virus research, March to June, 1950. The course, occupying the full time of the student, will include lectures, discussion and laboratory work; the latter including the techniques currently used with bacterial and mammalian viruses such as, methods of cultivation, purification, concentration, and assay of viruses, their serological reactions, and the hemagglutination. Credit for two full courses or 24 points will be given by the Graduate School of New York University. Because the number of students is limited to 12, early application is recommended. Further information from the Department of Microbiology, 477 First Avenue, New York 16, N. Y.

AIR POLLUTION SYMPOSIUM

The American Meteorological Society's 30th anniversay meeting in St.

Louis, January 3–6, 1950, will feature an air pollution symposium. The symposium will be presented in two parts, the first a panel discussion on abatement, enforcement, public health significance, control equipment, etc.; the second, a series of technical papers on sources of air pollution and its control. Further information from the American Meteorological Society, 5 Joy Street, Boston 8, Mass.

DIVISION OF INDUSTRIAL HYGIENE MOVES

In line with the policy to concentrate environmental research activities in Cincinnati, a large segment of the Division of Industrial Hygiene, Public Health Service, has moved from Washington to the Environmental Health Center building in Cincinnati. Thus for the first time since the war, the Division will have adequate laboratory space.

DR. TOP MOVES TO MINNESOTA

Gaylord W. Anderson, M.D., Dr.P.H., Mayo Professor and Director, School of Public Health, University of Minnesota, Minneapolis, has announced on behalf of the School of Public Health the appointment of Franklin H. Top, M.D. of Detroit as Professor of Epidemiology, effective September 1950. According to the announcement, Dr. Top will also carry appointment in the Department of Pediatrics in the Medical School in connection with clinical instruction in the acute communicable diseases.

Dr. Top, who is a native of Michigan, was graduated in medicine from the University of Pennsylvania in 1928 and received his M.P.H. from Johns Hopkins in 1935. He has been connected with the Herman Kiefer Hospital and the Detroit Department of Health since 1930, and for the last eleven years has been Director of Communicable Diseases and Epidemiology in the Detroit Department of Health and the Herman Kiefer Hospital. Dr. Top has served for the last three years as Secretary of the Epidemiology Section, A.P.H.A.

DR. SECKINGER APPOINTED DISTRICT OF COLUMBIA HEALTH OFFICER

Announcement was made by the Board of Commissioners of the District of Columbia early in November of the appointment of Daniel L. Seckinger, M.D., Dr.P.H., formerly the Assistant Health Officer and Coördinator of Health and Hospitals, as Health Officer of the District of Columbia to succeed George C. Ruhland, M.D., retired, effective November 3.

Dr. Seckinger, who has served on the Washington staff since 1935, holds M.P.H. and Dr.P.H. degrees from Johns Hopkins University School of Hygiene and Public Health.

The names of five bureau directors who have recently taken over responsibility in the District of Columbia Health Department follow:

Charlotte P. Donlan, M.D., Bureau of Cancer Control

Richard L. DeSaussure, M.D., Bureau of School Medical Inspection

Walter W. Burdette, Bureau of Food Inspection

Carl C. Dauer, M.D., Bureau of Preventable Diseases

J. Edgar Caswell, Bureau of Public Health Education.

PERSONALS

MAURICE L. ALLCORN, formerly Classification Analyst for the Indiana State Personnel Bureau, has been appointed director of the Division of Personnel of the State Board of Health succeeding WALTER J. WOLPERT,† who now holds the newly created position of executive assistant in the Bureau of Local Health Administration.

M. ROBERT BARNETT, blinded at the age of 15 and the youngest director ever to head a national organization for the blind, is new executive director of the American Foundation for the Blind, with headquarters in New York City.

ESTHER B. BARTLETT, R.N.,† formerly director of nurses, Wood and Sandusky Counties, Ohio, has been made superintendent, Bureau

* Fellow A.P.H.A.
† Member A.P.H.A.

of Public Health Nursing, Toledo, Ohio, Health Department.

GARRY G. BASSETT, M.D., has succeeded WALLACE J. BENNER, M.D., as Health Commissioner, Lakewood, Ohio.

CHARLES H. BENNING, M.D.,* formerly chief of Public Health for Office of Military Government, U. S. Sector of Berlin, has been appointed Chief of the Public Health & Welfare Branch, Office of U. S. High Commissioner Government for Land Hesse.

MARY S. BITNER, M.D., for 3 years assistant professor of hygiene, Iowa State College, recently became Director of the Maternal and Child Health Division, Nebraska State Department of Health.

KATHLEEN BOLAND,† a graduate in public health education from the Columbia University School of Public Health, has been appointed assistant director of health education in the Erie County (New York) Health Department.

GORDON E. BROWN, has succeeded ROBERT V. TITUS as director of public relations and fund raising for the New York State Charities Aid Association.

MARY LEE BROWN, R.N., B.S., M.P.H.,* director of public health nursing and associate professor of nursing education, Meharry Medical College, has been awarded a Commonwealth Fund fellowship and is on a year's leave of absence to study the Social Aspects of the Medical Care Program in Great Britain, under the direction of the London School of Hygiene and Tropical Medicine.

MARGARET CAIN, who has been Executive Secretary of the Oswego County (New York) Tuberculosis and Health Association for the last 3 years, has resigned to accept a staff position with the Rochester-Monroe County Tuberculosis and Health Association, Rochester, N. Y.

J. BERRY CHRISTIAN, has begun her duties as a clinical nurse for the Sweetwater-Nolan County (Texas) Health Unit.

DAVID COWGILL, M.D.,* former director of the Abilene-Taylor County Health Unit in Texas, is now Health Officer of Eau Claire City and County, Wis.

ETHEL DAVIS, senior staff nurse, Cortland County (New York) Health Department has resigned to become elementary school nurse in the City of Cortland.

RICHARD E. ELVINS, M.D.,† formerly director of the San Angelo-Tom Green County Health Unit, Texas, is now chief physician at the Texas Medical Center, a unit of the Medical Department of the Phillips Petroleum Company, Phillips, Tex.

PAUL S. FANCHER, COL., MC., USA, assumed duty in August as Chief of Medical Service, Walter Reed General Hospital. He succeeds COLONEL CHARLES R. MUELLER, who has been transferred to Murphy General Hospital, Waltham, Mass.

SAUL FRANCES, M.D.,† formerly a member of the Department of Bacteriology, College of Physicians and Surgeons, Columbia University, has become Director of Wells Laboratories, Inc., Jersey City, N. J., to provide consultant service plus research and testing facilities to commerce and industry.

JOE W. GREEVER, D.D.S., formerly in private practice, has joined the Division of Preventive Dentistry, Oklahoma State Department of Health, to do clinical work in local health departments throughout the state.

WILLIAM MASON HALE, M.D.,† has been named head of the bacteriology and virology division, and SIDNEY C. MADDEN, M.D., of the pathology division of the Department of Medicine at Brookhaven National Laboratory (New York), northeastern center for nuclear research. Dr. Hale formerly was professor and head of the Department of Bacteriology of the College of Medicine, Iowa State University, and Dr. Madden was professor and chairman of Department of Pathology, Emory University School of Medicine, Atlanta, Ga.

NANCY L. HANEY, for the past 2½ years associate editor of the Publications Department of the Y.W.C.A., National Board, has been appointed assistant to the public relations director of the Committee on Careers in Nursing.

RALPH E. HEAL, PH.D., formerly with Merck & Co., Rahway, N. J., has been appointed Technical Director of the National Pest Control Association, Brooklyn, N. Y.

MARTIN D. HICKLIN, M.D., M.P.H.,† is the new medical director, Iowa State Health Department District Health Service No. 9, with headquarters in Burlington, and director of the Des Moines County Health Department.

MARY WILLIAMSON HOOKER, formerly director of fashion publicity for Cecil & Presbrey, New York City, has been named director of public relations for the New York Tuberculosis and Health Association.

GUSTAVA JONES, R.N., formerly with the Omaha Visiting Nurse Association, has accepted a position in the Tuberculosis Control Division, Nebraska State Health Department.

MARY KARPIAK,† formerly health educator of the Onondaga (New York) Health Association, has been appointed to a similar position in the Rochester City Health Department.

JEANNE HESS KEENER, has succeeded JESSIE S. GLASS as supervisor of health education and program development, Tuberculosis Society of Lancaster County, Pa.

ANDREW W. KOVACS, for the past 4 years research editor, Michigan Tuberculosis Association, is now director of health education, Tuberculosis League of Pittsburgh.

CARL L. LARSON, M.D., formerly assistant chief of the Laboratory of Infectious Diseases, Microbiological Institute, National Institutes of Health, is now Director of the Rocky Mountain Laboratory of the Public Health Service, succeeding RALPH R. PARKER, M.D., deceased.

CHARLES H. MANN, M.D., DR.P.H.,* formerly associate director, Department of Public Health, E. R. Squibb & Sons, is now medical director of the Heyden Chemical Corporation, New York, Professional Products Division.

H. BERTON MCCAULEY, D.D.S., became on August 1 the first full-time director of the Bureau of Dental Care in the Baltimore City Health Department.

FLORENCE L. MCKAY, M.D.,† director of the Division of Maternal and Child Health, Massachusetts State Department of Health since 1936, retired on October 31.

FRED P. MEYERS, PH.D., who has been doing polio immunization research for the National Foundation for Infantile Paralysis, joined the staff of the Colorado State Health Department as Assistant Director of the Laboratory Section.

CLARICE L. H. PENNOCK, who served as Secretary of the National Conference on Family Life, will direct a new program of field work in the four social science departments of Vassar College (Poughkeepsie, N. Y.) under a five year grant from the Carnegie Corporation.

DAVID L. PIPER, PH.D.,† director of health education, Oregon State Health Department, has resigned to become health education consultant, Institute of Inter-American Affairs of the U. S. State Department, where his first assignment will be in Lima, Peru.

BENEDICT RAMIN, M.D.,† child welfare physician in the Division of Tuberculosis, Massachusetts State Department of Health since 1931, is now tuberculosis consultant in the Boston branch office of the Veterans Administration.

VERNE ROBINSON, has been appointed Director of the Division of Public Health Statistics, Indiana State Department of Health, succeeding ROBERT E. SERFLING, PH.D.† who resigned to join the U. S. Public Health Service.

JONAS E. SALK, M.D.,* has been promoted to the position of research professor of bacteriology in the School of Medicine, University of Pittsburgh. He is directing the work of the school's virus research laboratory concerned with problems in influenza and poliomyelitis.

DOROTHY E. SCHOBER, M.P.H.,† who for the past 3 years has been health education consultant, New Haven Health Department, became heart work consultant for the New York State Committee on Tuberculosis and Public Health, New York, on November 1.

WILLIAM H. SEBRELL, M.D.,* director of the Experimental Biology and Medicine Institute of the National Institutes of Health, has been appointed a member of the Joint Expert Committee on Nutrition of the Food and Agriculture Organization and the World Health Organization.

CLAUDE A. SELBY, M.D.,* formerly director of the Cameron County Health Unit in Texas, has been appointed director of the new San Patricio County Health Department, with headquarters in Sinton.

JAMES SPROUSE, a recent law graduate of Columbia University, New York, has been employed by the West Virginia State Department of Health to make a thorough search of the Minutes of the Public Health Council and the Code of West Virginia, so that an up-to-the-minute edition of all public health laws and regulations now in force may be obtained.

JOHN S. STANLEY, M.D.,† superintendent of preventive medicine, Indianapolis City Board of Health for the last 3 years, has gone to Tokyo where he will act as public health officer under GEN. DOUGLAS MACARTHUR.

WILLIAM H. TURVILLE, M.D., recently retired from the U. S. Naval Medical Corps after 32 years' service, has been named an epidemiologist in the Division of Tuberculosis, Massachusetts State Department of Health.

HARRY E. UNGERLEIDER, M.D.,* Medical Director of the Equitable Life Assurance Society of the United States, New York, was recently elected President of the Association of Life Insurance Medical Directors at the New York meeting.

FLORENCE WALT, social hygiene educator, Nebraska State Health Department since 1943, has resigned to become Dean of Women and Health Education Instructor at Doane College, Crete, Neb.

LOUIS F. WARRICK,* formerly director, Bureau of Sanitary Engineering, Wisconsin State Department of Health, has been appointed Chief of the Technical Services Branch of the Water Pollution Control Division, Pub-

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* Fellow A.P.H.A.
† Member A.P.H.A.

lic Health Service, with the rank of Senior Sanitary Engineer.

ORLEN J. WIEMANN,† formerly sanitarian, Eau Claire City-County Health Department (Wisconsin), is now in charge of the food sanitation unit, Colorado State Health Department.

DOROTHY WILSON,* formerly assistant professor in nursing education, Teachers College, Columbia University, is the newly appointed director of the New Haven (Conn.) Visiting Nurse Association.

VIRGINIA M. WILSON, formerly nutrition field representative, American Red Cross, is now on the nutrition staff of the West Virginia State Department of Health.

RECENT ADDITIONS TO THE ALASKA TERRITORIAL DEPARTMENT OF HEALTH:

RHODA COLLINS, is associate nutrition consultant, stationed at the Anchorage Branch Office.

EDWARD O. HOPKINS, formerly District Sanitary Engineer for the Texas Department of Health, has become District Sanitary Engineer of the Fairbanks district office.

VIRGINIA MCMULLIN AND ANN MARIE KINGSTON, associate public health nurse and public health nurse respectively, have joined the staff of the Anchorage Health Center.

WILLIAM L. PORTER, formerly engaged in river pollution control for the state of Nebraska, is district sanitary engineer for Southeastern Alaska.

ROBERT L. SMITH, M.D.,† formerly Director of the Tuberculosis Control Bureau, New Orleans Department of Health, is now assistant commissioner of health, stationed at the Anchorage Branch Office. He will direct all Interior health department activities such as x-ray surveys and special programs.

MARGERY THOMPSON, formerly of the University of California Hospital in San Francisco, is now associate public health nurse to the Fairbanks Health Center.

MARIBETH T. TURNER, formerly in health and welfare public programs of Alabama and Louisiana, is associate medical social consultant, Anchorage Branch Office.

NORMAN R. WITZEL, M.D., who recently completed his interneship at Seattle General and Children's Orthopedic Hospital in Seattle, is a field physician, and his wife, a public health nurse, stationed on mobile units.

RECENT CHANGES IN PERSONNEL SERVING PUBLIC HEALTH DEPARTMENTS IN OREGON ARE:

EVELYN AIELLO, M.D., is full-time Deputy Health Officer for Multnomah county.

WILLIAM S. MCINDOE, replaces KENNETH FLOCKE, Chief Industrial Hygiene Engineer, now on nine months educational leave, and JOCELYN FANCHER as Audiometrist to succeed BARBARA SCHREINER, resigned.

FREDERICK F. RAWLS, M.D., is full-time Deputy Health Officer for Clatsop county, to fill in for LEONARD M. KAHL, M.D., on educational leave.

BERNICE SMITH, was appointed as Clinic Nurse in Douglas County Health Department.

DEATHS

IRVIN ABELL, M.D., president of the American Medical Association in 1939 and president of the American College of Surgeons in 1947, died August 28.

CALVIN C. KIKER, C.E.,† Chief Engineer, Malaria Control Division, Health and Safety Department, Tennessee Valley Association, Wilson Dam, Ala. (Engineering Section).

WILLARD C. MALLALIEU,† Engineer for the Jersey City Water Works, Boonton, N. J. (Engineering Section).

CONFERENCES AND DATES

American Association for the Advancement of Science. New York, N. Y. December 26–31.

American Association of Schools of Social Work. Milwaukee, Wis. January 22–24, 1950.

American Statistical Association. New York, N. Y. December 26–29.

American Water Works Association:

Southeastern Section. Gordon Hotel, Albany, Ga. December 5–7.

New York Section Midwestern Luncheon. Hotel Statler, New York, N. Y. January 17.

Arkansas Public Health Association. Robinson Memorial Auditorium, Little Rock. December 8–9.

Community Chests and Councils of America. National Conference. Cincinnati, Ohio. February 1–4, 1950.

Illinois Public Health Association. Leland Hotel, Springfield, Ill. April 20–21, 1950.

Maternity Center Association. Annual Meeting. New York, N. Y. January 19, 1950.

National Conference on Cardiovascular Diseases. Mayflower Hotel, Washington, D. C. January 18–20, 1950.

National Conference of Social Work. Atlantic City, N. J. April 23–29, 1950.

National Council on Family Relations. New York, N. Y. December 29–31.

National Health Council. Annual Meeting. New York, N. Y. March 24, 1950.

National Social Welfare Assembly, Inc. Annual Meeting. New York, N. Y. January 19–20, 1950.

National Society for the Prevention of Blindness. Annual Conference (held in conjunction with interim meeting of Pan American Association of Ophthalmology). Miami Beach, Fla. March 26–30, 1950.

National Tuberculosis Association. Annual Meeting. Washington, D. C. April 24–28.

New York State Health Conference. Lake Placid, N. Y. June 5–8, 1950.

Southern Branch, American Public Health Association. Birmingham, Ala. April 27–29, 1950.

Western Branch, American Public Health Association. Portland, Ore. May 30–June 1, 1950.

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This handbook, prepared by the Committee on Virus and Rickettsial Diseases of the Laboratory Section and edited by the Chairman of the Committee, Thomas F. Francis, Jr., M.D., details procedures which can be employed and interpreted by laboratory workers in the diagnosis of sixteen virus diseases. The diseases selected are essentially those of man for which procedures are available for use in a diagnostic laboratory.

Each of the sixteen sections has been written by an authority in the field. Much of the experience of each author has been contributed to his chapter and as a result the entire volume constitutes a compilation of methods proved by actual experience.

The volume has grown out of a recognized need for a publication of collected methods and has developed from a round table presentation at the Annual Meeting of the American Public Health Association in 1946. The methods are not presented as standards but are those most currently useful.

Members of the committee who have contributed and their subjects are as follows:

Psittacosis
K. F. Meyer, Ph.D., M.D. and B. Eddie, Dr.P.H.

Lymphogranuloma Venereum
Geoffrey Rake, M.B.

Trachoma and Inclusion Blennorrhea
Phillips Thygeson, M.D.

Variola and Vaccinia
Robert F. Parker, M.D.

Influenza
George K. Hirst, M.D.

Primary Atypical Pneumonia
A. E. Feller, M.D.

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John F. Enders, Ph.D., and Jeanette H. Levens, M.P.H.

Poliomyelitis
John R. Paul, M.D.

Encephalitis (Arthropod-borne Virus Encephalitides and Lymphocytic Choriomeningitis)
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Rabies
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Air Pollution (Public Health Significance, Distribution and Control of Air-borne Pollens). [May Year Book 1949.] 17 pp. 35c.

American Public Health Association. [November, 1947.] 10 pp. Editorial. Free.

Bibliography of Public Health Motion Pictures and Film Strips. [February, 1949.] 3 pp. 15c.

Camps and Camping. [May Year Book 1949.] 6 pp. 15c.

Changing Challenges of Public Health. C.-E. A. Winslow. [March, 1945.] 8 pp. 15c.

Commercial Exploitation of Glycol Vaporizers. [February, 1949.] 2 pp. Free.

Desirable Minimum Functions and Organization Principles for Health Activities. An official Declaration of the American Public Health Association. [1943.] 12 pp. Single copies free.
Three or more copies 5c each.

Food Utensil Sanitation Proposed as Official Association Procedure Committee on Research and Standards. [May, 1948.] 3 pp. 10c.

Hospitalization of Cases of Communicable Diseases Together with Certain Considerations of the Isolation Techniques and Nursing Procedures Used. [Oct., 1949.] 6 pp. Free.

How to Find What Health Education Materials You're Looking For. [August, 1944.] Revised 1948. 4 pp. 10c.

Improvement of Local Housing Regulation Under the Law. [Nov., 1942.] 16 pp. 25c.

Lemuel Shattuck—Still a Prophet. [February, 1949.] 27 pp. 25c.

Medical Care in a National Health Program. An Official Statement of the American Public Health Association Adopted October 4, 1944. [December, 1944.] 6 pp. Single copies free.
Five or more copies 5c each.

Methods for the Microbiological Examination of Foods. [May Year Book 1949.] 3 pp. 5c.

Microbiological Methods for Frozen Dessert Ingredients. [1948.] 28 pp. 40c each.

Principles for Consideration in Judging the Probable Effectiveness of Federal Legislation Designed to Improve the Health of Children of School Age. [April, 1948.] 4 pp. 10c each.

Problem of Proper Illumination. [July, 1948.] 1 p. 5c each.

Quality of Medical Care in a National Health Program. A Statement by the Subcommittee on Medical Care. Dean A. Clark, Chairman. [July, 1949.] 28 pp. 10c each, 100 copies $7.50

Recommended Methods for Rabies Control. [January, 1948.] 4 pp. Free.

Recent Observations of the British National Health Service. [May, 1949.] 6 pp. 15c.

Recommended Practices for the Control of Poliomyelitis [September, 1949.] 4 pp. 5c.

Statement of the Relationships of the Voluntary Health Agencies to the School Health Program. [March, 1949.] 3 pp. 10c.

Use of Body Measurements in the School Health Program. Harold C. Stuart and Howard V. Meredith. [December, 1946.] 21 pp. 25c.

Ventilation and Atmospheric Pollution. E. R. Hayhurst, Chairman. [July, 1943.] 7 pp.
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Who Is Un-American Now? Editorial. [December, 1947.] 4 pp. Free.

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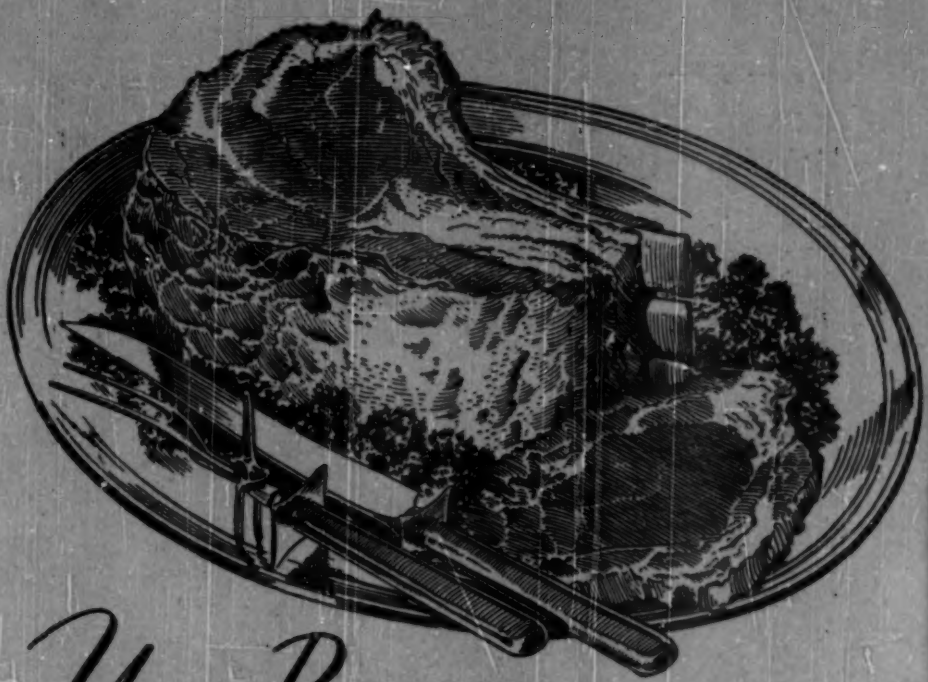

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